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PROCEEDINGS

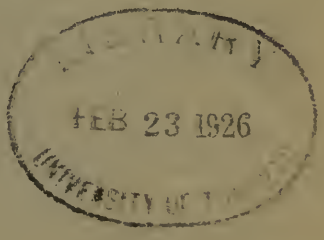
OF THE

Fifth Annual Session

OF THE

Ohio State Educational Conference

Keynote:
DEMOCRACY IN EDUCATION



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PROCEEDINGS

OF THE

FIFTH ANNUAL SESSION

OF THE

OHIO STATE EDUCATIONAL CONFERENCE

Keynote:
DEMOCRACY IN EDUCATION

OHIO STATE UNIVERSITY
COLUMBUS, OHIO

THE SIXTH ANNUAL EDUCATIONAL CONFERENCE
OHIO STATE UNIVERSITY

April 8, 9, and 10, 1926

Keynote: Training for Teaching

GREETINGS

THE ANNUAL Educational Conference has grown in the minds of most of us to be an institution. We look forward to it with keen expectation. Its history as set up in the programs will persuade any reader of the high levels reached in the papers and discussions. Those at the University interested in developing the programs have kept in mind the importance of fresh and critical discussions of actual conditions in the modern school. It is appropriate to renew at this time an expression of appreciation to all those who have contributed to the program in past years and to that degree have assisted in carrying forward the ideals of the builders of the program. The University participants have been highly gratified with the evidences that the Conference has met a real need in the experience of superintendents and teachers.

The effort in the past, as in the present program, has been to set out a vital theme and to provide such discussion of it as will relate the principles of education to actual practice in the schools. It goes without saying that the objectives in the program are of the most practical sort. The improvement of the teacher and his method, the improvement of the organization and the increased efficiency of the schooi all center upon the educational progress of the pupil.

It is well, therefore, for us to keep in mind that the school exists for the education of the youth. Important as all other issues may be, the vital issues center in the progress of the child. Too often one might imagine that the chief interest on the part of educationists centers in the tools and machinery of the teacher. A smoothly working device is not always an assurance that we are on the way toward better results. It is quite easy to deceive the best of us by diverting our minds to an exaggerated interest in the rattling of machinery.

Among other high aims in education, it is well to have in mind that we live in a highly organized world where intellectual power; accuracy; and precision in thinking; discernment; and power of analysis with a certain ability to think straight through, free from circumlotion, to the heart of the question are essential to any leadership worth while.

This intellectual power when associated with moral discernment and high purpose will provide the only leadership for any of us that will insure a proper or adequate interpretation of the world and of the life that renders the world significant.

The belief that such high and holy ambitions find a place in the lives of the best teachers urges us to extend a most cordial invitation and welcome to all teachers whose situations are such as to make attendance at the Conference possible. The University opens its doors and extends a warm hospitality to all who may come.

W. O. THOMPSON
President

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GENERAL SESSIONS

GENERAL SESSIONS

THURSDAY, APRIL 2

EDUCATION IN A DEMOCRACY

LIVINGSTON FARRAND
President, Cornell University

Mr. President, and Ladies and Gentlemen:

I was given entire freedom in the choice of a subject, and I had some difficulty in reaching a decision until I received a program which told me that the general topic of this Conference was to be "Democracy in Education." It went no further. It did not indicate exactly how that particular phraseology was to be interpreted. I did not know whether the general subject was to be democratic administration in education or the general concept of democracy as an aim and responsibility in education.

It did, however, set my thoughts running along the line of certain problems, very fundamental problems of today, in education, and it is of one or two of these that I propose to speak. I shall not dwell largely upon the particular educational aspects, but I shall leave you to draw the inferences, which I think are fairly obvious. It is also, you will recognize, incumbent upon me if I speak of education at all, to speak more particularly of college and university education, because it is that field with which I am most familiar. However, I think that whatever is true, broadly speaking, of our colleges and universities, would imply an application to the schools as well, because after all they are parts of one system.

It is always useful and it is always necessary for us to re-examine from time to time the fundamentals of our democracy. We need to re-examine our national ideals, and we need to re-assert them from time to time. I think there are certain tendencies which we see today in our American democracy which are causing all thoughtful citizens rather grave apprehension. They may not call for pessimism, but certainly there are tendencies which are disquieting.

We must recognize at once that any given formulation of national aims in the latter part of the eighteenth century whether in the form of a written constitution or otherwise, does not continue sacredly and necessarily applicable in all its details to the American democracy of today. The fact remains that neither the demands of an imposing industrial growth and development in this country, nor even the new stage that has been set by the catastrophic war from which we have just emerged has suggested anything which can supplant the underlying principles upon which this nation of ours was founded.

Adaptability to the shifting demands of a developing world is, of course, an essential to any survival. All human institutions whatever have arisen in response to practical demands. Systems of religion, of government, of jurisprudence, of education, when analyzed and viewed in the long retrospect of their history have grown up from crude devices to meet simple needs. Even the organization of the groups that we call nations has been dictated by geographical or political conditions, the force of which varies with the years. And flexibility is absolutely indispensable if survival is to be assured.

The danger lies in forgetting that there are certain underlying ideals, I say, which have demonstrated their permanence and their worth, as well as their entire independence of those considerations which call for modification in political organization or in economic relations, or even in personal habits and conduct.

Nothing has been discovered that can replace those fundamental ideas of liberty, of justice, of honor, and of truth, to use the generally accepted terms, as the foundation upon which the nation has been built, and yet it is some of these very corner stones that this seething world we are now in seems willing at times to submerge.

We as a people believe, and nothing has yet appeared to disprove it, that the best expression of fundamental ideals in political organization is what we know as democracy. Our fathers erected a nation on this continent that was, as we say, dedicated to those ideals, and that nation has withstood the test of nearly

a century and a half. If it has not been with complete success, at least it has been with a very decided vigor and with a very lusty growth throughout its history.

One of the questions you and I have to put to ourselves today is whether this apparent strength, this apparent vigor of the American democracy, this success, if we wish to call it such, has been due to adherence to those great principles or whether it has been due to certain factors of advantage which we as a people have done nothing whatever to create.

Great problems, of course, have to be expressed in fairly concrete terms; and to define the task which the expression of our national ideals necessitates, it seems to me that "self-government" is perhaps the simplest available phrase. If I had been called upon to give a title to such remarks as I have to make tonight, it would be to call it "The Difficult Task of Self-Government." I say that self-government is perhaps the simplest available phrase to use which will describe those concepts that drew our fathers to these shores, and the determination to achieve which carried them through the struggle that resulted in the nation.

The simplicity of that term, self-government, is far more apparent than real. It postulates not only the right to participate in government; its fulfillment demands personal freedom, equal opportunity, the privilege of individual opinion, and perhaps above all—and this is the first point I want to make to you very strongly,—perhaps above all tolerance, tolerance in all the relations of personal and national life. It presupposes not only the right and the privilege; it carries the responsibility of personal service if success is to be assured.

It signifies the hope of a condition in which men may lead a life which is reasonably comfortable and happy, where they may share in the world's accumulated store of knowledge, where they may have freedom within the widest limits, to order their lives according to their own ideas of good, or at least a condition where there shall be no artificial barrier placed in the way of attaining such an end. Economic and social relations become involved and the maladjustments that exist in our own as well

as in all the nations are too constantly before our eyes to call for description. The problem so presented is of course the most pressing of the day.

Now turn back if you will eight years, eight short years, to 1917. The great step of entering the war had been taken. A new atmosphere enveloped this country. More than a hundred million of us were asking but one question and that was, What can we do to help in the nation's crisis? It was suddenly made clear that these very ideals of democracy of which I have just been speaking were fighting for their very existence. We had not been conscious of this peril. And on our own national soil in this bewildering growth of our country, we had been permitting those ideals to grow dim.

We were, as you will well remember, lamentably unprepared for the test to which we were summoned in 1917. Generations of prosperity had made us slothful, had made us self-indulgent, and all our unmeasured national resources had made us as a nation extravagant and careless. An unthreatened security had made us contemptuous, and the international isolation in which we had lived had made us blind to the lessons that the experience of neighbors might easily have taught. Resourceful as we had been as a nation in the search for material success, we were notoriously inefficient in the administration of public affairs. In other words, we were as a nation undisciplined to a degree which was almost unparalleled in history.

The universal re-awakening of the idealism of the nation gave promise of a new era. We began to inspect anew throughout this country the principles upon which this democracy rested. We recalled the forgotten fact that self-government is a task as well as a privilege. The sacrifice that the country was called upon to make carried a great hope and a great inspiration. We believed that the trial was going to prove the nation's salvation. We thought that we were going to emerge from that trial a new people, that we should be leading new lives and thinking new thoughts, that we should accomplish social and civic transformation for which, under ordinary circumstances, centuries would

not have been enough. And we prayed that there should arise a new America that should be freed of its complacency, of its indifference, of its greed, an America that should stand for the world, as it had nearly one hundred and fifty years before, a pledge for the safety of democratic ideals and human liberty.

The war was fought to a technical conclusion. An armistice and a so-called treaty of peace offered new outlines to the world picture and defined the world problems in less dramatic terms. There came a vision of re-establishment, which was blocked by the injection of new political alignments in Europe. The inevitable reaction followed. The wearied people, as you well remember, turned back to their own affairs. Absorption in personal interests immediately began to replace in the individual that spirit of service that the crisis of war had shocked into expression, and it was clear to the most undiscerning eye that the eager hopes of 1917 had not been realized.

It is this reaction with its accompanying phenomena which offers the chief obstacle to the re-establishment of what we call stability or tranquillity in the world situation, and it is with this reaction and its accompaniments, and with our responsibility therefor that you and I as simple citizens are chiefly concerned today.

As stated before, over five years of rather futile effort at re-establishment have brought about a situation both baffling and depressing. We look abroad at Europe and we see political, economic, and social confusion. Improvement is taking place, to be sure, but national jealousies have been revived, hatred and suspicion are everywhere in evidence, and material advantage seems to be the limit of statesmanship and political outlook. The confusion is so complete that no one sees the path of emergence. One thing is certain, and that is that the way out is not to be found in terms of reparations adjustment, or of political boundaries, or of balances of power. The only way lies, of course, in the recognition of certain simple fundamental principles of action and of life, both personal and national.

The world situation demands a new comprehension of the

simple principles that nothing can replace destruction of material values except industry and its product, that liberty and justice are still the ideals toward which mankind must strive, that a democracy cannot survive without personal responsibility and service, and that peace is impossible without honor and generosity in international relations.

This plight of Europe is a very easy theme, but it is our own house with which you and I are concerned. I wish to direct your thoughts tonight to certain problems of our own. It is fairly obvious, I think, that I am in total disagreement with this national attitude, which, with fatuous simplicity, would hold our nation apart from the general situation overseas.

As a matter of fact, we have no choice. To complicate a moral situation with mental obtuseness, we are a high international ideal sacrificed to the petty considerations of petty politics. To gain a hearing for even so obvious a step as the entrance of the United States into the World Court, we must repudiate in the most vigorous fashion even a step-brother connection with an anathematized League of Nations. Of course in due time we shall enter such a League, modified as conditions may demand, and when we do we shall doubtless volubly and vociferously explain our delay. We shall deceive no one except ourselves. But the pathetic fact was the failure to seize at the time when real promise was offered, an opportunity to take a great step forward in international relations.

Now, while our immediate involvement may be less than that of sister nations, it is clear to any observing mind that we partake of the world confusion. Lest I be charged with a pessimism which I do not feel, let me recall to you at once a great heartening fact and that is the surge of response to the Nation's call in 1917. It was the most encouraging fact in American history. From sea to sea the underlying idealism of the people was proved beyond peradventure and therein lies the pledge of the future.

But this indefinite optimism is a futile guide. It is characteristic of that very complacency that has so often beclouded and

delayed our national progress. Far more dangerous than that, however, are certain tendencies that have been making their appearance. To my mind, the most disquieting phenomena of these times is the outbreak of intolerance, of a reign of prejudice which seems to have swept over the American people. The right of the majority to rule as conceived today in legislature after legislature, in section after section of this country, is a charge apparently to translate an opinion, no matter how ill-formed, into a code of conduct to which all must conform. Congress and our legislatures are the scenes of fanatical attempts to enact into mandatory law group prejudices of every kind. Schools and colleges, as you well know, are the objects of attack. Under the appealing name of patriotism there is demanded a teaching of history which may pander to our national vanity, but which is entirely inconsistent with fact. Misguided conservatism insists that biological science shall suppress the conclusions or implications which the patient search for truth has made logically inevitable. The church is once more the seat of denunciatory conflict exploited out of all proportion to its significance, and the chief effect of which will be to repel the very public which it is so necessary to attach.

In a word we are giving rein in these days to crude impulses and tendencies which are entirely incompatible with the tolerance of opinion and the freedom of speech and action, without which the successful operation of democracy is an impossibility.

There is no doubt that we have permitted to grow dim, I repeat, certain of those ideals upon which the nation was founded and to maintain which our fathers in clear-sighted faith were prepared to fight and die. If there was a clarion call to sacrifice and service in the crisis of 1917, there is no less unmistakably a summons to clear thinking and to self-discipline in this national confusion in which we find ourselves. It is in situations such as this, not in war, that the fitness of a nation for self-government is given its crucial test.

Difficult as it is to analyze and describe the existing state of mind, it is still more difficult to account for it. To the disloca-

tions of war, of course, very much may be laid. Neither men nor nations can suffer with equanimity a sweeping away of values which generations of ease and tranquillity have served to establish. Unexpected shock will create hysteria in crowds as well as in individuals.

There can be no doubt, however, that more deep-seated and even less tangible factors are playing their contributing rôles. There is nothing more fundamentally essential in this or in any other democracy than the preservation and safeguarding of individual opportunity. If this be lost, the system fails. It must not be forgotten, however, that the self-absorption of individual protection and advantage makes naturally for narrowness, not breadth of outlook. Its concomitant is more apt to be selfishness than sympathy. And this danger to broad and liberal mindedness is all the greater in prolonged periods of material prosperity, such as those with which this nation has been favored for generations. In other words, the guarantee of individual opportunity entails an obligation of respect for the rights of others on the part of the beneficiary, and this respect is not conspicuously apparent at the present time.

I venture to suggest another obstacle to attaining that individual breadth of view and sympathy without which democracy cannot successfully survive. The outstanding facts of our recent history are our growth in population and the development of our industrial system. These have brought with them profound changes in our national life. Perhaps the most striking internal symptom which has characterized these changes is the tendency to specialization, which seems to be inseparable from them. It appears in every industry or activity in which as a people we have engaged. It is often cited as the secret of what we call our unparalleled material achievement and success.

There can be no doubt, however, that, contribute as it may to production and wealth, specialization and its concentration is sterile soil for the development of that breadth of experience and background from which alone sound and liberal judgment can spring, whether in personal or civic affairs; and it is precisely

this liberal and tolerant attitude of mind of which we as a nation stand most in need of today. I have said that this tendency toward extreme specialization appears in every activity of life. I am one of those professionally concerned with education who hold that this tendency presents one of our most serious contemporary problems in school, college, or university organization, and this is my reason for bringing it before you tonight.

The aim of our educational system is of course to prepare the American youth for his life as a member of his community and country, not primarily to afford him an advantage in the quest of material success and wealth. There is no doubt in my mind that in the effort to provide initial advantage, our schools have been led perniciously astray in the over-fostering of so-called vocational training, and our universities are scrutinizing with justified apprehension the excessively technical content of their professional curriculums. The danger lies, of course, not in too much technical or specialized knowledge, but in the possible disregard of that broad and liberal basis and training without which success in its truer significance is not to be attained.

There is sound reason in the undoubted reawakening in the university and college world today to the value of that less organized and more widely distributed academic discipline that we associate with the idea of the traditional American college, and I say this speaking from the point of view of a modern American university, with which I am personally concerned.

This is not the time or the place to present a discussion of the academic organization of our higher institutions of learning. The demand for technically trained men is here and must be met, and modifications of carefully constructed courses of study are not to be brought about overnight. The first essential is that we shall agree upon a need; that we shall recognize that true education consists in producing a disciplined mind in a sound body, a mind actuated by high ideals and possessing a knowledge as complete as may be of the best that has been thought and said and written in the whole field of human effort.

This brings me to the last word, which is after all, my theme of

this evening. It is a very grave responsibility that rests upon our schools, our colleges, and our universities in these troubled times. To prepare for self-government and citizenship is not a simple task. More fundamentally important than the inculcation of knowledge is the imbuing of a plastic youth with the ideals of public responsibility and service. That the material lies ready and responsive, no one who is in touch with young American manhood and womanhood can for a moment doubt. To guard and guide and inspire that great army is the charge of every school and college and university in the land, maintained in a spirit of tolerance, of service, and of truth. In this way, and in this way only, shall the ideals of liberty and of justice and of righteousness survive in this country and in the world.

THE NEED OF A NEW PROGRAM IN EDUCATION

B. H. Bode
Ohio State University

It is only a few years since we have come out of the shadow of a great war. During the progress of the war there was much talk about democracy, about the new era of peace and good will that lay just ahead. It was a war to end war, to make the world safe for democracy. There were times when the strain on the European nations involved in the conflict seemed more than human flesh could endure, when the endless sacrifices of life, and energy, and means of subsistence threatened to culminate either in revolt or in despair. At those times the flagging spirits were revived by reminders that all the hopes of humanity were at stake, that the supreme moment of all history had arrived. An exaltation of spirit was achieved which enabled men to accomplish the impossible and which finally brought the war to a victorious conclusion. Civilization was all but ruined, yet it was felt that the result was worth the price. "Mine eyes have seen the glory of the coming of the Lord." All the world was on tiptoe to glimpse

the coming of the new day. The state of mind was Messianic even among the nations that had gone down in defeat.

We can readily understand now that these high hopes were foreordained to fail. The mills of the gods grind slowly at best. Past history cannot be set aside by act of Parliament, and a world-wide regeneration cannot take place overnight. The passions that had been set loose by the catastrophe of war did not automatically become agencies for good after peace had been declared. The aftermath of the war has been disillusionment, intolerance, dictatorships, waves of crimes, and quarrels over reparations.

There is danger that the loss of faith resulting from the war will prove an even greater calamity than the war itself. In political matters we seem to have grown cynical, which means that we expect selfishness to dominate, and do not grow indignant when our expectations come true. The scandal of the Teapot Dome, for example, found the American people curiously apathetic. For the time being, at any rate, there seemed to be less emotional reaction to "Thou shalt not steal" than to "Don't rock the boat." The tremendous events that had been crowded into the span of a brief decade had made us, emotionally, a people grown old. We had become incapable, temporarily, of reacting to things with the hot fervor of youth. We were like the grandmother in Tennyson's poem who accepted the vicissitudes of life with an equanimity that others found it hard to understand.

> Why do you look at me, Annie? You think I am hard and cold,
> But all my children have gone before me, I am so old;
> I cannot weep for Willy, nor can I weep for the rest;
> Only at your age, Annie, I could have wept with the best.

The great crusade for democracy has ended in disappointment and distrust. In some respects it was like the great crusades of history, when the watchword, "God wills it," thrilled the whole Christian world and made it rise up to wage war on the infidels. This earlier enthusiasm likewise lost itself in rivalries and distractions. To the men of those times those great expeditions must have seemed to be a colossal failure. They could scarcely be expected to appreciate the significance either of the incidental

results of those wars or of the social forces which lay in the background and which found expression in those tremendous events.

If we take such occurrences out of their social context and observe how they fail to realize their aims, we are bound to become pessimistic. But if we take the wider point of view, things begin to look different. Perhaps the Crusades were merely an incident in the great work by which Europe became Christianized, and perhaps the unforseen and unintended results of the Crusades furnished a large measure of compensation. The Crusades were not a miraculous happening, but were the outcome of centuries of teaching and preaching, when there was no thought of crusades. The social and religious forces making for the spread and the purification of Christianity were still in operation, even though the Crusades had failed, and these forces operated on a higher level after these wars than they had done before.

A crusade for the recovery of the Holy Land would be an impossibility in our day. But a crusade for democracy was a possibility, as events have shown. The social forces lying back of these events were of a different kind. Our present concern is with only one of these forces or agencies, namely, secular education. Even a casual glance at educational statistics is sufficient to show that things have been changing rapidly. During the last thirty or forty years, so the experts tell us, the amount of education, per capita, in this country has been doubled. We have advanced from a nation of third-graders to a nation of sixth-graders. During this same period the enrollments of our high schools have increased tenfold, and many institutions of higher learning have grown in geometric ratio, so that their former size is beginning to look like the proverbial mustard seed. In fact many of them present visible evidence of having outgrown the wildest dreams of their founders. The buildings are crowded on small plots of ground and keep spilling over the edges, or they are separated by stretches of intervening city districts. The reason is not that adequate space was unavailable when the institution was laid out, but that no one could foresee the change which was to come. The swing towards education has now been under way for a con-

siderable time. It is clear that something of tremendous significance has been taking place in this country, and to a greater or less extent all over the world.

It can hardly be doubted that education was one of the important conditions which determined the occurrence and the character of the World War. It made possible the response to the appeal for the right to self-realization, self-expression, or self-determination which is symbolized by such words as liberty and democracy. The war has come and gone, but our faith in education abides. This faith has even been intensified by the war. We still believe that the world must be made safe for democracy, but we do not talk about it so much any more, and we do not expect the job to be done all at once. We now look to education to accomplish the result which political agencies have failed to bring about. As President Coolidge said not long ago: "Education has come to be nearer to the hearts of the American people than any other single public interest."

If we view education from the standpoint of world events, we see it in a new perspective, or at any rate with a new emphasis. It behooves the present-day educator to pause and take stock. Our modern education differs from that of earlier times, not only in sheer bulk or amount, but also in its quality or direction. Even a surface view of the situation shows that this is the case. With all their faith in education, the American people are noticeably lacking in reverence for scholarship, as this word is understood in the old country. The novelist, Barrie, for example, in one of his books tells a story pertaining to this topic which anyone would recognize at once as more typically European than American. It is the story of a humble simple-minded Scotch family which was willing to make any sacrifice in order that Jamie, the son who had the mind of a scholar, might be educated at the university. There is no hint that this was undertaken in order that Jamie might then be in a position to draw a large salary. Nor, as I recall, is there any suggestion that Jamie's education would have practical utility of other kinds. Utility, as we ordinarily understand the term, had nothing to do with the matter. Jamie's field of scholarship might be Sanskrit or hieroglyphics or the fourth dimension,

for it was all one. Scholarship was an end in itself; it was placed on a pedestal to be worshipped. To find a parallel to this attitude we must look, not to America, but to other European countries, and particularly to pre-war Germany.

To our average American citizen such an attitude is a strange thing. His ideal man is a man of affairs, not a man of great erudition. Apparently he has never been able to make up his mind definitely about professors. Just why a competent, able-bodied man should choose to spend his life in studying and teaching is likely to be something of a mystery to him. A population that bestows the title of professor on corn doctors and parachute performers and the like is not greatly burdened with reverence for scholarship. Someone once wrote an article about professors, under the title, "The Third American Sex," which is unpleasantly suggestive of what may be a prevailing state of mind. During Wilson's first campaign for the Presidency it was noticeable that some of his opponents made it a point to use the titles of "Doctor" and "Professor" in speaking of the candidate, while his supporters were equally careful to avoid these appellations. It was felt on both sides that these titles tended to discredit the candidate with the voters. At first sight there is something odd in the fact that this general attitude towards scholarship should be combined with a more whole-hearted support of education and with a more profound appreciation of its significance for the common man than can be found in almost any other country. This fact is not explained adequately by saying that education is appreciated because of its practical value. In spite of all the emphasis on the practical, the American people have never been willing to make vocational considerations paramount in education.

In order to understand this modern development we must see it in relation to its historic background. From its earliest beginnings our civilization has been dominated by the conception that the purpose of education is to prepare the individual for his proper place in society. This conception was simple and natural, for the reason that it was possible, generally speaking, to know in advance, with a high degree of accuracy, what that place was to be. These earlier forms of society, as we commonly say, were

aristocratic in their organization. That is, the organization was regarded as fixed and immutable in all essential respects. Every person was expected to remain in the class in which he was born. Liberal or cultural education, accordingly, was practically the exclusive possession of the leisure class, which could afford to devote itself to the cultivation of the mind and to disdain practical pursuits. The lowborn had no dealings with these higher things. Their education had to do with matters befitting their fortune and station.

On this basis the business of education was relatively simple. The pattern according to which the individual was to be moulded was at hand in every case. For example, in Plato's *Republic,* which, in spite of its intentions, is an excellent example of aristocratic organization, it is taken for granted that every individual will belong to one of three classes or groups, each of these having specific duties for which the members of the group are to be prepared by an appropriate course of training. All that the curriculum builders of those days had to do was to make a list of these duties and to analyze out the corresponding activities. Perhaps some historian will presently discover that Plato was the original inventor of the method of job analysis.

This scheme of education has proved more and more unsatisfactory under modern conditions. We believe profoundly that to limit the education of any part of the population to strictly vocational or technical subjects is not in accordance with the principle of the "square deal." The persons to whom such a limitation is applied are shut out in advance from interests and activities in which they are entitled to participate. And the traditional liberal education is perhaps equally inadequate. The "cultivation of the mind" to which the leisure class used to devote itself has come to mean the study of a subject from the standpoint of the research specialist. We are coming to believe that specializing in research is just as much a vocation as specializing on the stock market, or on styles in millinery, and that the one is not necessarily any more liberalizing than the other. The old conception of liberal education does not fit modern ideas and modern needs. In other words, the change in social organization has made it

necessary to move towards a corresponding change in education.

Viewed from this standpoint there is nothing very puzzling in the fact that the American people tend to combine faith in education with distrust of scholarship. Without education no person can hope to share in his spiritual heritage, to have a part in our common life. But when this result is sought by cultivating the methods and the attitude of the research specialist, there is reason for distrust. Specialization is of immense importance and requires no apology but it should not be confused with the aims of liberal education.

The upshot of the matter is that our whole perspective on education is undergoing a change. This change has been made inevitable by the development of democratic ideas and ideals. But unless we have a guiding principle there is bound to be much confusion and misdirected energy. That is why a careful understanding of the whole problem of education is an urgent need. We have, for example, rejected the aristocratic ideal of liberal education, but having done so, we seem to have no respectable notion of what a liberal education should be like. We have given vocational education a place in the public schools, but we have never been able to decide whether or not it should be regarded as real education, on a level with all the rest. We believe that our curricula should be revised, but we do not know where nor how to begin. Our susceptibility to educational fads has become notorious. We are clearly in a transitional stage. The old and the new are in constant conflict, but the friction, as the saying is, generates more heat than light. In the language of the poet,

> We are here as on a darkling plain
> Swept with confused alarms of struggle and flight,
> Where ignorant armies clash by night.

It would be folly to say that the situation is wholly bad. For one thing, it affords us a valuable opportunity to cultivate the sense that we are living in a wide-open universe. We have been hemmed into the "right little, tight little" chimney-corner of tradition long enough. And in spite of the conflicts and cross-purposes, education is steadily being made over in accordance with

the needs and the spirit of the times. But our educational progress has been too much a more or less mechanical resultant of forces, rather than the product of a clear-eyed and far-seeing policy. There are too many false moves, there is too much waste of energy. If H. G. Wells is right in saying that the future depends on a race between education and catastrophe, this hit-and-miss procedure may spell ruin. In any case, if we believe in democracy, why should we not try to embody it in a comprehensive educational program? If the development of modern education has back of it the same idealism as that which found expression in the World War, what better service can our educators render than to make education safe for democracy?

As a first step in this direction we need to remind ourselves of the platitude that the world will not be redeemed merely by increasing the *amount* of education. There is bad education as well as good education. We are told in Holy Writ that the Pharisees were wont to encompass sea and land in order to gain a single convert, and that, having won him, they would then proceed to make him tenfold more a child of hell than they were themselves. How did they do it? The answer is simple. They educated him. They trained him thoroughly in their vicious formalism and self-righteousness, and the zeal of discipleship did the rest. Present-day education is such a tangle of the old and the new; how can we tell which is which?

In the second place it is necessary to bear in mind that education cannot be divorced from social theory, from a conception or standard of social organization. This proposition is not enjoying wide favor at present. There are many educators nowadays who have scant patience with what they call philosophizing. To them the problems of education are all problems to be worked out with a yardstick and statistical curves. The irony of the situation is that these highly modern persons are a century or two behind the times. The tide of democracy has swept around and past them without even attracting their attention. Education, for them, is still a matter of training in skills and in the passive acceptance of prevailing standards, which is wholly in the spirit of the aristocratic tradition. No account is taken of the fact that the in-

dividual must either be fitted to become a cog in the social mechanism or else must be educated according to some notion of how this mechanism should be changed. To suppose that the work of education can be carried on effectively without reference to the larger issue is plain self-deception. There can be no neutrality.

The Greeks never made the mistake of supposing that education is a thing apart. Plato's *Republic,* as the title indicates, is a treatise on the state as well as a treatise on education. Despotic governments have always been watchful of what is taught in the schools. They know, whether our present-day educators know it or not, that the schools of today determine the government of tomorrow. Napoleon at the height of his success, took pains to issue elaborate directions for the training of children in order to make the schools his ally for the perpetuation of his power. In this country there have been various attempts during recent years to determine the character of teaching by legislation. These attempts were a violation of our long-standing policy, which decrees that the government must keep its hands off the schools. We have maintained this policy, not because we believe that the government is not affected by what goes on in the schools, but because we believe that no government can be trusted with the control of teaching and of the curriculum. It is a matter of principle. Dictation by governmental authority in such matters is bad, without regard to the merits of the particular issue. We cannot afford to jeopardize the future for the sake of an immediate result. In the nature of things governments are concerned chiefly with security and perpetuation; they are suspicious of novelty and change. Consequently governmental manipulation of the schools tends inevitably towards stagnation and decay. On the other hand, a democratic society is equally concerned to make provision for future changes in the interests of progress, and for this purpose it relies chiefly upon its schools.

This concern about future changes may be taken as the characteristic and differentiating trait of a democracy. Whether a social organization or an educational system is aristocratic or democratic in spirit is not to be determined by an inspection of labels but by observation of its drift or tendency. The spirit is

aristocratic when the general drift is toward keeping the social structure unchanged, in apple-pie order, when our chief concern is centered on fitting the individual into a foreordained groove. The spirit of aristocracy may express itself in the doctrine of the divine right of kings, or of the immutable perfection of the constitution, or in the demand for a differentiation between liberal and vocational education on the basis of the "I. Q." It all comes to the same thing in the end. There is one issue which overshadows all the others, namely, whether our Golden Age is located in the past or in the future. It has sometimes been pointed out by critics abroad that we Americans tend to regard our institutions and practices as final; that our minds are closed, so that we are less tolerant and less progressive than other countries. No more serious criticism could be made than this. In so far as it is true we are not democratic, whatever we may choose to call ourselves. A truly democratic society regards its institutions and practices as instrumentalities that are to be modified or discarded with the growth of experience. It is consciously in process of becoming; at every point in its history it is imbued with the sense that it is still in a formative stage. The purpose of education is not to fit the individual for a place in society, but to enable him to make his own place. Our business is not to train for three classes in society, as Plato thought, or for any other fixed number, but for as many classes as there are individuals to be educated. In other words, a democracy must expect to outgrow its organization as a child outgrows his clothes. The organization of the moment may serve a valuable and necessary purpose, but it must not be regarded as final. We put shoes on a child to protect his health and not to bind his feet.

Democracy in politics is a familiar notion. Democracy in education is a relatively new thing. It is true that the fight for universal public education was carried on in the name of democracy, but the purpose of this fight was to bring education to the people, not to put democracy into education. The reinterpretation and reorganization of education from the standpoint of democracy is our present task. We do not break with the past as long as we do not set up different social aims. We need a new program, in

order to embody the meaning of democracy in our system of education.

The attempt to realize the democratic ideal makes education a much more difficult matter. It is relatively easy to train a person for a specific function or place, but this, according to the democratic ideal, is precisely what we must not do. Superficially there is an element of paradox in it all. Education must prepare for life, but life is a changing thing. The life of the next generation will be different from ours, and it will be different in ways that we cannot foresee. How then can we prepare for it?

Perhaps the simplest answer to this question is that education should enable the individual to educate himself when the time comes. We cannot train him in his future duties, because we do not know what they will be. One of the hardest things for us to learn is that it is not our business to impose our own standards upon the next generation. There are always plenty of people who are convinced that the world is going to smash every time the girls change the color of their rouge. Sound education does not seek to prescribe belief or conduct, but to provide for the creation of new standards in accordance with new conditions and new needs. This, in substance, is the core of our educational problem. In so far as we fail at this point, we are reactionary, however much we may disguise the fact by a display of technique and scientific method.

In spite of all the improvements that have undoubtedly been made in education, we have not gone far in this direction. In educational psychology the emphasis is constantly gravitating towards habit formation on the mechanical level. In curriculum construction we find the same thing. The newest movements advocate the selection of material for training in specific duties, as though life consisted in an aggregate of specific duties and tasks. In methods of teaching we have been unable to escape from the ideal of "learning," of gathering information to be used at some future time. There can be no effective and thorough-going reorganization of education unless we envisage our problem from the social point of view.

It must be admitted that our schools have failed rather con-

spicuously to create in the pupil a sense that life is an adventure and that the achievements of the past are primarily so much material for dealing with the problems of the present. The schoolroom still has too much the atmosphere of the museum in which the specimens of knowledge are all duly labeled and catalogued and filed away. In the teaching of civics for example, why should any normal healthy youngster concern himself with the dreary skeleton of our governmental system? As a recent writer says: "Can we expect the student to develop an interest in the fact that Congress is made up of two houses, with a certain number of members in each house, and that our State Legislatures have one or two houses with a certain number of members? I think not! But I do think we will find them interested in the broader and more fundamental question of the nature of representation itself. Are our Legislatures truly representative merely because there are certain numbers of people entitled to select one representative? Can one man adequately represent a district which is partly urban and partly rural? Is the development of 'blocs' such as the agricultural 'bloc' anything but an attempt to work out this problem of representation? Out of the development of such questions as to the nature of representation can come a basis for the consideration of our present-day legislative bodies." [1]

An approach of this sort has far-reaching implications both on curriculum construction and on the problem of teaching method. There is much to be done in both directions if we are to create in the mind of the pupil a sense of living on the ragged edge of things, a sense that life is an experiment, a constant venture into the unknown. This state of mind is as far removed as possible from the traditional attitude. It means that the emphasis should fall, not on conformity, but on insight, not on the acquisition of information and skill, but on that peculiar process of making over our experiences which we commonly call thinking. The pupil must do his own world-building. The development of thinking is the essence of method. But to cultivate thinking effectively we need a better insight into thinking as a process by which men

[1] Vinacke, H. M., "Smugness in Civic Teaching," *Educational Review*, 69:8-13, January, 1925.

become humanized and are trained for membership in a democratic organization. Our schoolroom practices have not yet been brought into line with the newer social ideal. How should we organize our educational material and how should this material be handled in the classroom, in order to make it contribute directly and effectively, to a better understanding of the world in which we live? We have rejected the psychology of Herbart, but our theory of thinking is, for the most part, still on the level of Herbartianism.

In the Preface to a volume entitled *Heretics,* Mr. G. K. Chesterton says:

> There are some people—and I am one of them—who think that the most practical and important thing about a man is still his view of the universe. We think that for a landlady considering a lodger it is important to know his income, but still more important to know his philosophy. We think that for a general about to fight an enemy it is important to know the enemy's numbers, but still more important to know the enemy's philosophy. We think the question is not whether the theory of the cosmos affects matters, but whether in the long run anything else affects them.

By the same token we may say that the most important thing about an educator is his social vision. The question is not whether social vision affects educational practices, but whether in the long run anything else affects them. We want a better world to live in. To get a better world is no easy task, even under favorable circumstances, but the circumstances have not been favorable. Vested interests have maintained that the social order must not be changed. Theologians have taught that men are totally depraved and incapable of better things. Hard-headed worldlings and cynics have argued that what has been always will be. Men have lived by selfishness and deceit, they have practiced cruelty and treachery, and they have waged bloody wars to secure ignoble ends. They have always done so in the past; what reason is there to think that they will not continue to do so in the future?

These views are less convincing than they used to be. There is a growing sentiment all over the world that the chief source of

our ills lies in our social organization. We are the victims of our own machinery. We have built up geographical, and commercial, and linguistic, and educational boundaries which inevitably breed crime and war. Men are neither as bad nor as good as they have been made out to be. They react to their social environment, and this environment is capable of evoking both the best and the worst that is in them. Change the environment and you change the stimulus to behavior. Wars and crimes are not inevitable, because the social environment is not unchangeable. Time was when the physical and the social environments alike were supposed to be beyond our control. It was our part to accept whatever happened in a spirit of submission and resignation. To put up lightning rods was evidence of impiety. But the brilliant triumphs of science have wrought a complete change in our attitude towards the physical world. As a consequence we are constantly making over our material surroundings to suit our needs. On the social side our development is still a long way behind. The development is retarded in large part because of educational practices. When our educational systems become imbued with a humane social ideal, our social development will rival our material development, and man will no longer be the creature but the master of his environment.

GENERAL SESSION

FRIDAY, APRIL 3

ART EDUCATION IN A DEMOCRACY

HENRY TURNER BAILEY
Director, Cleveland School of Art and John Huntington Polytechnic Institute

Leisure is at once the most precious and the most dangerous gift to mankind. Most precious, because it enables the human spirit to participate in its priceless heritage, the spiritual world.

The spiritual world is that wonderland created by the seers, the prophets, the poets, the artists, the musicians, the dramatists, and the novelists of our race. Its foundations were laid for us by the author of that august epic of creation in Genesis; that world was enlarged by Homer, who added new races, new cities, and the immortal gods of Greece; Herodotus enriched its population; Caesar annexed Gaul and extended its boundaries beyond the Rhine; Sir Thomas Malory added valiant knights and fair ladies; Scott gave us King Richard and Saladin; Dante peopled a heaven and hell; and Milton revealed to us Satan and the hosts of militant angels. Shakespeare added a company of men and women who are indeed ourselves writ large; Kipling added a jungle with every living animal; Hitchins, a desert; Masefield, an Antarctic storm. The kings and queens of the world look at us from the canvases of Raphael and Sir Joshua; Rembrandt and Franz Hals show us its merchants and craftsmen; Millet, its patient workers in the open fields, and Landseer, its animals. Its birds and butterflies and flowers sing and dance and bloom forever in the nature books. The wondrous skies of that world are revealed to us by Turner; its shady nooks, by Corot; its rippling streams, by Thaulow. In that land the music of Beethoven, Mendelssohn, and Bach, of Handel, Wagner, and Brahms, may be heard at any moment.

That world is the celestial health resort for all children of men.

To be a free citizen of that realm is health and joy, and peace. Leisure makes all that possible.

But leisure is the most dangerous of gifts in the hands of those who do not know how to use it wisely. When men and women spend their leisure hours in idleness and vicious gossip, in illicit drinking and gambling, in sexual indulgence and reckless joy-riding, the more leisure they have the worse it is for them and for everybody else. They depreciate in value; they become a menace to society, a burden that the state has to carry.

Character is determined partly by what a man does for a living; but more largely by what he does with his leisure time. Science, invention, big business, and a more equable distribution of the products of industry, will surely give to us an increasing amount of leisure. What will we do with it? Ruin ourselves with it, or enrich ourselves with it? A primary function of the public schools is to educate for the right use of leisure. Vocational guidance is important, but avocational guidance is vastly more important. The teaching of sewing and cooking, of typewriting and accounting, of woodworking and electric wiring is all right, so far as it goes; but the teaching of the so-called fads of education is of supreme importance, for through nature study, drawing and design, through vocal and instrumental music, poetry and supplementary reading, every pupil in every school may discover his door of hope, his entrance to the enchanting realm of the spirit, his pathway to a successful life.

He may be doomed to tend a tyrannous machine, to be a mere cog in the wheels of a great industry, a slave to a vast corporation. He may be forced by circumstances to grind all his day in a Philistine prison, but the eyes of his immortal soul need not be blinded nor his spirit broken at the wheel. Whatever his occupation, free and right and happy he may live in companionship with the great spirits of all time, if a gateway into the spiritual world has been opened for him.

The realm of art should be thought of as including music, poetry, drama, and novel, architecture, sculpture, painting, and handicraft,—all those results of the activity of the constructive imagination of men, constituting the spiritual wealth of the race.

Art education will mean, then, the initiation of all our children into that great fraternity whose members enjoy this vast wealth, buy and sell and get gain therewith, and lay up additional treasure for those who shall come after us.

Such art education must be both general and specific. It must be general in the sense that all must be reached by it and influenced by it to the extent of habitual free participation in the use of that vast spiritual treasure. It must be specific in its aim to reach every talented boy and girl, and to train that talent intensively for the good of all.

We must invent and operate the machinery which shall segregate these talented children and distribute them among the higher institutions capable of developing them to the full.

Increasing wealth and increasing intelligence continue to demand the best the country can supply in the making of beautiful homes, synthesizing all the fine arts. The Democracy cannot afford to let its most precious possession—talented children—escape through its clumsy fingers. It must discover, encourage, foster, and subsidize, if necessary, all such children, for the preservation of its own spiritual wealth, the realization of its growing ideals, the promotion of its happiness, and the larger and more abundant life of all its people.

PILLARS OF THE NEW SOCIETY

GLENN FRANK
Editor, Century Magazine

Ladies and Gentlemen of the Conference:

You have just listened before the music to an address that was creatively beautiful in its diction, and beautifully creative in its ideas. And I am decidedly embarrassed to have to follow the beauty of that address with the rather raucous note of an extremely matter-of-fact discussion. And I am embarrassed to follow the creativeness of that address with a discussion that is confessedly an adventure in negative criticism. I am consoled

only by the fact that sometimes you have to tear down an old building before you can put up a new one.

Just the other day, I heard of a colored cook in an extremely proper and respectable and well-ordered Episcopalian household. This colored cook had recently got religion at a Methodist camp-meeting, and thereafter insisted upon shouting, singing, and praying at the most inopportune times from the standpoint of this very regular and very respectable Episcopalian household. Finally the man of the house took a hand in the matter and said to the cook, "Narcissus," for she had that primitive love of simple names, "Narcissus, you should not be so loud about your religion. I wish I could get that preacher of yours to preach to you Negroes a sermon on the building of Solomon's Temple, which, if I remember rightly, was raised without so much as the sound of a hammer." She said, "Bless you, Brother Johnson, us niggers aren't thinking of building a Temple yet. We are just doing the blessing now."

I haven't any feeling that I am going to be very satisfied from the standpoint of creation following this masterly address to which you have just listened. But I am willing to content myself with the humble job of doing a little blessing. So I want to speak to you for a while tonight on the subject of "School and State in a Democracy," or "Can We Drive the Professor and the Politician Abreast?"

Last summer, when President Coolidge was obliged, on account of a very bad cold, to cancel his agreement to deliver the commencement address at the University of Michigan, the late President Burton asked me to undertake the very difficult task of substitution. I went on Commencement Day to Ann Arbor as a living symbol of the fact that if every young man in America cannot aspire to be President of the United States, at least some of us can hope now and then to be the beneficiary of a President's bad cold.

When I got there, I wanted to dull the edge of disappointment as much as possible, and in order to do it, I undertook to deal with the sort of problem to which the President might have been expected to address himself had he been able to keep to the first

plan. Accordingly, I discussed, in all too fugitive a fashion, I realize, the sort of relation between university, church, and state, that it seemed to me would result in the most virile and veracious national life. Later I compressed the essential ideas of that all too hastily arranged address into an editorial essay under the title, "Three Pillars of Society: A Free University, a Pacific Church, and a Realistic State."

Since then the particular problem of the relation of the university to the state has haunted me as one of the most fundamental issues of our time. And tonight I want to suggest certain frankly tentative considerations regarding this fundamental problem of the relation of the school to the state in a democracy. I want to discuss, in order merely to dramatize the general problem in terms of the concrete, I want to discuss tonight the relation of our great state universities to our state governments, and to discuss that as a sample of the whole problem of the relation of school to state.

In the Michigan address last June, and in the editorial essay to which I have just referred, I emphasized the fact that the university, the church, and the state are engaged in a common enterprise. In that address I said that I disliked to speak of education, religion, and politics as if they were three separate fields; that they are, or should be, an indivisible unity; that if you isolate any one of them from the other two, you will have it orphaned and ineffective.

Certainly you cannot isolate education from religion without doing great harm to both. As nearly as I can remember the wording of it, L. P. Jacks, the brilliant and provocative editor of the *Hibbert Journal,* recently speaking about the relation between education and religion, said something like this: "All education should be religious, and all religion should be educational. That which begins as primary education should end in religion, and that which ends as religion should begin as primary education. Otherwise, he says, "religion will be a process for which there has been no preparation, and education will be a process leading to no definite or worthy goal. If," says Dr. Jacks, "the battle of civilization is lost in our schools, who is going to win it after-

wards? What chance has the parson from the pulpit, and what are the chances of legislation in our legislatures and parliaments. By startng" he says, "a whole generation on the wrong track in its plastic period, and then when it has grown up to send out the parson and the policeman to bring it back, what idiot's enterprise can compare with that?"

Well, certainly you cannot isolate politics from the great fields of education and religion, unless you want politics to become a very sterile and very petty thing. After all, politics is the field in which all the rich and radiant forces of our national life meet and mingle. The politician, when he rises, really rises to the nobler conception of politics, is something more than the mere juggler of post-office appointments or merely the astute engineer of a party machine. A statesman is, or at least he ought to be, a sort of impressario of the creative energies and enterprises of his people. He ought to be the man, he ought to be the force, he ought to be the factor that would lure all the specialisms of our business men, our bankers, our labor leaders, our artists, and our scholars out of their now air-tight compartments, and weld them into a fighting fraternity for the common good.

What I am trying to do, as I did in that address, is to say that the professor, the parson, and the politician are all at work on the same job, not on three separate jobs, and that one job is the achievement of what the Greeks called "the good life" for the citizen and for the nation. Here then we have at last a trinity in unity and a unity in trinity that we ordinary mortals can understand. At least we have here a trinity in unity and a unity in trinity that we must understand if we expect to have a creative and free life for our nation.

I suggested, however, in that address last June that the unity of aim shared by the university, the church, and the state cannot be served by the successful attempt of any one of these institutions to rule the roost completely and to impose on the other two institutions its particular notion, thus converting the whole nation into a vast Shaker village with a drab uniformity of outlook and action. "Now and then," I said in that address last summer, "the professor, the parson, and the politician can best cooperate by

valiantly opposing one another. Times come when only out of an absolute clash between university, church, and state can corrected vision and creative policy arise." But, I remind you, that even in these hours of necessary opposition, university, church, and state, these three institutions, are engaged upon a common enterprise.

But these hours of opposition between university, church, and state come only intermittently. That is, they come only when our society faces really great crises in the determination of policy. Last summer in that address I dealt with the technique of this occasional conflict between university, state, and church, but tonight I want to consider the technique of cooperation between university and state, in particular, in those normal times when the life of society runs at its normal pace, undisturbed by any great and dramatic crises of policy.

Obviously, the need of sustained cooperation between university and state needs no argument. Certainly the state needs it, because the present divorce between the theory and practice of government has to be ended somehow. It is not safe going on, as Dean Inge suggested sometime ago, with the theory of government in the hands of scholars who have the knowledge, but no power, and the practice of government in the hands of politicians who have power, but no knowledge. For after all, the art of government is the art of bringing knowledge and power into a working partnership.

The politics of the future in this country ought to be simply the technique that the American people adopt for bringing the world's knowledge to the service of the world's life. Politics ought to be simply a point at which knowledge meets light and becomes socially effective. It is only by working ourselves over into that sort of politics that we can protect ourselves from the assaults of those catchwords, snap judgments, prejudices, passions, and special interests, which like thieves, infest the Jericho road of partisan politics in America. Obviously politics in America needs a better underpinning of facts. American politics needs more laboratory workers and fewer logrollers.

Theoretically, at any rate, a state university should be the repository and the rallying ground for the knowledge necessary for

the wise management of the life of a state, and a state government is, or ought to be, the repository and rallying ground for the power needed for the effective management of the life of a state. Obviously if our states are to help their citizens achieve the good life, these states will have to find out some way to get the maximum use of both the knowledge of its university and the power of its state government. The state simply dares not allow the knowledge of its university to languish for lack of power, or allow the power of its state government to run amuck for lack of knowledge.

It would seem, therefore, that finding some basis for a continuous and effective cooperation between our great state universities and our state governments is a matter of great and grave significance to the future of our American states. So let us put it down that the state needs what might be got out of a very intimate cooperation between its schools and its government.

Second, it may be that the university needs this kind of cooperation, because learning is plainly most significant when its roots are set deeply in the soil of modern life. The absent-minded professor walking around like a human incubator in which great ideas are brought to life by some sort of spontaneous generation is a creation of the jester and of the caricaturist, because more and more education in this country is finding its point of departure, at any rate, not in the past, but in the present. And there are enough things in the day-to-day life of our Ohios, our Michigans, and our Wisconsins, things in which the students of these great institutions are of necessity interested, things they can see, and touch, and handle, to serve as vivid points of departure for the study of every field of knowledge known to university curricula.

As I see it, the closer learning can be brought to life, the more valid and virile learning is likely to be, provided always that learning can keep from getting lost in the shuffle and can avoid adopting the standards of the market place in a purely uncritical surrender to the common life of the State.

I have a notion that John Stuart Mill was a much better scholar because he had contact with the political life of his time and served in the East India Company. I have a notion that the books

of the late Lord Bryce and the late John Morley are better books because the authors had to test the validity of their ideas in the rough and tumble of Parliament and of Cabinet session.

So may we, at least in passing and for argument's sake, agree on this second point. First, that the state needs what might be got out of the closer cooperation between education and politics. And second, that education might benefit from a closer cooperation with politics, bringing learning very close to life.

In our more naïve moments, we are likely to think that if the state governments so obviously need what state universities and other school units might contribute, and if state universities need that intimate contact with everyday life that such cooperation with the state government might give them, the problem is easy. Simply adopt, some one may say, a working arrangement under which the experts of our universities and teachers in our colleges and high schools would be called upon to provide the politicians of our government with the knowledge they need in order to pass around sound judgment on the current problems of state government. Somebody may say, do that and you will put a fact basis under our politics to start with, and then you will also save our scholars from the subtle dampness of the cloister that has mildewed so many otherwise first-class minds.

But because a need is obvious, it does not follow that meeting that need is an easy enterprise. The moment we set foot in the enemy country of details in this matter, we begin to see the staggering difficulties that we must face in attempting to work out any kind of realistic cooperation between our universities and school systems on the one hand and our political state governments on the other.

For instance, at the outset we are faced with a difficulty that is perhaps inherent in democratic societies. There is nothing to be gained by scouting the fact that the scholar simply is not the idol of democracies. The scholar finds the road to service to the state blocked by two things that have, at least up to date, characterized our democracies. And those two things are, first, the jealousy of the majority, and second, the tyranny of the majority.

Think for a moment about the jealousy of the majority. In any democracy, the majority is, and probably always will be, jealous of its superior men. A democracy rarely elects its superior men to public office, save by accident, or when some superior man succeeds in disguising his essential superiority by the slouch of his hat, the mountebankery of his manner, or the vernacular raciness of his speech. Democracies, if we are to be brutally truthful, apparently are not out looking for representatives who know more than the majority knows. Democracies are apparently looking for delegates who are as nearly as possible like the majority. All of which boiled down into one sentence means this: that the crowd hates the expert, and we may as well acknowledge that fact.

Now, think for a minute about the tyranny of the majority and what that means to the scholar and to the professor. In any democracy, the majority tends and probably always will tend, to exercise a tyranny over minority opinion. The scholar who has greater reverence for a fact than he has for the past is quite likely to turn up a minority opinion every now and then. He probably will get investigated for his pains.

This, again, works against the scholar ever doing anything in intimate cooperation with the political government. Personally, I believe that we in America are today suffering very greatly from the tyranny of the majority, against which Alexis de Tocqueville warned us back in 1835 when he published his monumental work on democracy in America.

Despite the fact that the majority has never since the dawn of human history, taken even one advance step on its own initiative, and despite the fact that the majority has always had to be prodded into progress by a minority, despite all that which lies on the surface of history for him to read who runs, despite all that, today the majority insists upon using the device of majority rule for silencing controversy, as well as for settling contests.

It seems perfectly obvious to me when we are discussing the matter of majority and minority opinion that two things are self-evident. The first is this: that the peace of society depends upon the institutions of society being controlled by the majority. You cannot turn over the institution of organized society to the helter-

skelter, pioneering, leap-frog activities of minorities. You can't do that. Your great basic institutions have to be kept in the hands of the majority if you want a peaceful society.

But the second, and equally self-evident fact, to me at any rate, is that the progress of society demands that we allow the minorities of the country to direct the discussion of the country. If we want a balanced society that is both peaceful and progressive, there must be an interplay of sportsmanship between majority and minority. The minority must be sportsmanlike enough to play the game after the majority rule has settled a given contact, and play the game under the result of that vote, until further discussion and further investigation has changed enough minds to change the vote.

We hear a good deal about that now. The majority is very vocal, lecturing the minority on the fact that they ought to be sportsmanlike. Well, I agree perfectly when the majority preaches that way. But I am moved at the end of the majority's sermon, to rise somewhere in the audience, figuratively speaking, and remind the majority that it also has an obligation to be sportsmanlike, and if the minorities are sportsmanlike enough to play the game with the majority controlling the country's institutions, then the majority ought to be big enough to allow complete freedom of speech, of address, and of the press for the expression of the country's minorities.

I said these were self-evident truths. Well, they are. But that does not alter the fact that the majority does not recognize them as self-evident truths, both of them. The plain, unadulterated, ungloved, brutal truth of the situation is that the majority hates the man who thinks differently from it and has nerve enough to say so.

The scholar in politics, then, starts with this dual handicap which springs out of the mental habits of the majority. But even when the scholar, by some happy combination of circumstances, is able to jump over these two hurdles of the jealousy and the tyranny of the majority, he faces still another handicap when he attempts to work side by side with the politicians in any state government. The minute he gets to the state house he faces the in-

evitable conflict between the scientific mind and the political mind.

The scientific mind always thinks from facts to policy, but the political mind always thinks from policy to facts. The scientific mind is sublimely indifferent to such labels and catchwords as "conservatism," or "liberalism," or "radicalism." The scientist is perfectly willing to be a stone-edged conservative on Issue Number One, a Mid-Victorian on Issue Number Two, and a rebellious radical on Issue Number Three, if the facts in the case lead to those three divergent conclusions.

May I repeat? The scientific mind is sublimely indifferent to such catchwords as "conservatism," "liberalism," and "radicalism," but the political mind lives in day-and-night terror of these labels and catchwords. The scientific mind regards the unborn as part of its constituency, even if the unborn exert very little influence at the polls on election day. Obviously, all this means very far from smooth sailing for the professor when he leaves his classroom and journeys to the state capitol to serve the state government.

I think that out of these facts two things stand very clear. First, I think there is very little danger that our state universities in America will run away with our state governments. The age-old conflict between majority opinion and minority opinion, between the scientific mind and the political mind, is going to see to that.

Second, it is clear, I think, that we cannot afford, I am speaking now purely as an outsider, being neither an educator nor a politician, to let our state governments run away with our universities.

Always remember that I am only trying to make this specific by talking about state universities and state governments, because the antithesis is plain and simple there. When I say "university," I mean the whole educational life in American states. A too intimately political domination of our state universities will, in time and inevitably, produce in America a "reptile university" to serve current political ends, as Bismarck's "reptile press" served the political ends of the German Empire.

Is there then possible any workable and continuous cooperation

between state and university? Well, here and there, and now and then, very effective cooperation has taken place and will be possible in the future. Under a really great governor in any state or under a really great university president, and if any state can get the superb governor and the superb university president concurrently, any given state can go far toward driving the knowledge of the university, and the power of the state abreast. The research technique of the university can through such devices, such obvious devices, as legislative reference departments, and the part-time service of experts and professors on various state commissions, be used to supplement the good will of honest legislators and to obstruct the anti-social will of dishonest legislators.

I say that can happen and has happened here, there, and yonder in America. But such cooperation and such service have in the history of our American states been sickeningly intermittent. We can see it in full swing in one state, and then we can get into our Ford and run fifty miles across the state line and see a neighboring state in which the intellectual resources of its university have been allowed to go to waste politically, while the politics of its state capitol has degenerated into a mere logrolling between private interests.

Now, what I want to ask tonight is this: Aside from the occasional emergence of a great governor or the occasional emergence of a great university president, how much can we hope for in the way of intimate and continuous cooperation all over the country between state universities and state governments? Well, frankly, I doubt that we shall see the full and intimate cooperation between university and state that a rational view of politics on the one hand and education on the other suggests, as long as in America we insist upon centralizing so many of our interests in politics. As long as we put our major trust for social control and social management in politics, obviously the state will be supreme, and in any attempted cooperation between state and university, the state will sooner or later dominate the situation and bend the university or the school system to its will. This, of course, defeats the very purpose of the cooperation, which is to bring into politics the impartiality and the objectivity of the scientific mind, which

is more interested in the results of a test tube than in the results of a ballot box.

As I see it, the real hope for putting the knowledge of the university at the service of the life of the state depends upon our effecting in the next fifty years in this country an increasing decentralization of public affairs. But I do not mean the kind of decentralization that the defenders of states' rights have been talking about so much lately.

In my editorial in the April issue of the *Century Magazine,* on states' rights, I tried to suggest the hollow unreality of the argument that social progress in this country can be served by taking a lot of things away from the national government, and giving them back to our state governments. I was dealing in that editorial with the way in which the discussion of the recently proposed child-labor amendment to the constitution had been made the occasion for a revival of the doctrine of states' rights in this country under the alluring title of decentralization.

Since I have just said that I think the maximum service of the university to the life of the state can be realized only in the event of an extensive decentralization of public affairs; and since I immediately followed that with a protest against the present states' rights kinds of decentralization that is being so popularly applauded at this moment, it is only fair that I attempt in these closing moments to make perfectly clear why I regard the revival of states' rights decentralization a dangerous step backward, and to state what kind of decentralization will best serve our common life.

I cannot do better in this connection than by repeating two or three paragraphs from this April editorial to which I have referred. You will remember that when the proposed child-labor amendment was put before the country, students of American government very rapidly segregated into two camps: the camp of the centralizers on the right, and the camp of the decentralizers on the left. The apostles of a new nationalism began to measure swords with the apostles of a new localism. And roughly speaking, those who believe in a strong central government supported the child-labor amendment, while those who believe in

strong local government opposed the child-labor amendment. The centralizers said the national government should control and regulate child labor. The decentralizers said the state government should control and regulate child labor.

It was not that the decentralizers said that they were in favor of child labor, as certain of the opponents tried to make out. One of the outstanding opponents of the child-labor amendment said to me on the train during the hottest part of the fight, "All my life I have ardently championed the right of children to health, to education, to freedom from slavery to the demands of backward industrialists." And he said, too, "I believe that the proposed federal amendment would immediately speed up the emancipation of the children." "I do not," he said, "think that the power given to the national government would be abused or used unwisely." He said, too, "If this amendment did not sink its roots in an even greater issue, I would ardently support it."

"But," he said, "the time has come to call a halt in the increasing centralization of affairs at Washington. If this amendment passes, we may as well prepare for the end of local government and local liberty and resign ourselves to a future of increasing slavery to an all-dominating central government that will, year by year, poke its fingers into more and more intimate details of our personal and professional lives." Shaking his fingers at me, he said, "The root of the matter is this: for years we have been drifting into a centralization of affairs at Washington. The time has come for a conscious and far-reaching decentralization of affairs. It is the only way we can bring reality, as it should be, back into American politics. And we cannot do better, than to make a test case of this child-labor amendment." We are due to hear more and more about decentralization in the United States in the next ten, fifteen, or twenty years. It promises to become the catchword of a new political movement in this country.

But, tonight, and in conclusion, I want to suggest just one aspect in this matter of decentralization that I think most of the decentralizers are overlooking. I think it is perfectly clear that we have in the past carelessly committed to the jurisdiction of the national government a lot of things that we should have kept under

local jurisdiction. I think we have asked Washington to do a lot of things that Washington was not fitted to do. But I do not believe that we can correct our mistakes by carelessly re-commiting to our state governments the things that they are not today equipped either to decide upon or direct.

The more we examine our present state governments, I think, the less likely we are to look upon them as our most hopeful agencies for bringing superior statesmanship to the consideration and control of our modern social problems. To put the thing bluntly, I suggest that the doctrine of states' rights in this country is an obsolete issue, because our states are largely obsolete political units.

What do I mean by that? I mean this: that these geographical areas that we call States, our Ohios, our Illinois, our Missouris, our Wisconsins and our Michigans, bounded by arbitrarily or accidentally drawn lines on a map, these states of ours simply no longer represent distinctive social or economic interests or issues. Our States in this country obviously are not distinctive regions in which a special language, a special religion, a special culture, and a special kind of economic life set them apart from neighboring states. There are, of course, some slight differences of dialect and demeanor between the various sections of our country. I have been spotted as a Missourian many times, before cultivated Boston audiences. There are some slight differences of dialect and demeanor between the various sections of our country. But, by and at large, our States are purely artificial areas on the map, bounded by lines of India ink. You have only to cross the line that separates, say, Missouri from Iowa, to realize the essential artificiality of our States.

I do not know of a single real interest around which the lives of modern Americans revolve that does not daily cross and recross state lines. The development of cheap and easy means of travel and communication, plus the growing industrialization of our society, are making it less and less possible to regard arbitrary geographical areas as a sound basis of government. Fewer and fewer Americans every year, with each generation and with each year, are born, live, and die in the same state.

As H. G. Wells pointed out a good many years ago, we have slipped from around our necks the tether that formerly tied us to one place. We have become nomadic again. The whole history of civilization up to the time of the coming in of rapid transportation and communication was the history of a concrete settling down from a nomadic existence to a stable agricultural existence. But when rapid transportation and communication came in, we turned nomadic again, and here we are a generation of "gadders."

The old homestead is less of a factor, even a sentimental factor, in our lives. Rapid transportation and easy communication has made out of us a new race of Bedouins. And even when we live all of our lives in one place, our interests will not stay tethered in one state necessarily. I have a friend who lives in New York, but every single one of his economic interests is in Tennessee and Arizona. Now, I think that the artificiality of our states is apparent when we stop to think that this man's political citizenship is determined, not by where his mines are, but by where his bedroom is. You cannot substitute a pillow case for a factory in an industrial society, and expect realistic politics.

I suggest that in such a time when virtually all of the day-to-day realistic interests of modern Americans are straining against and breaking across these artificial lines that bound our states, that it hardly seems reasonable to suppose that we shall achieve a more realistic statesmanship by a decentralization that will throw more and more things back into the hands of our state governments.

This may sound as if I were pleading for an all-absorbing national government. That is a purpose far from my intention. In fact, I believe as I said a moment ago, that the decentralization of government is one of the livest issues in the generation. But in the same breath, let me say that the doctrine of states' rights is the deadest issue of the generation, despite the galvanizing of the corpse into sentimental activity on the child-labor amendment.

I believe that our national government should be deflated. But I do not believe that this needed deflation of our national government should mean an exaltation of our state governments in terms of a revival of the doctrine of states' rights. I believe that our government has grown top-heavy. I think American politics

is marked today by an overworked President and an indifferent people. And this is obviously an unhealthy situation. We do not need more political government in this country. We need less political government in this country. The way to a healthier national life lies, in my judgment at any rate, through a very great decentralization.

But when we decentralize, I suggest that the last place to turn for the new statesmanship is to our state governments. I believe that the decentralization we need is not a decentralization from a big political unit, like the government at Washington, to a lot of smaller political units like our state governments. But I believe that the decentralization we need is a decentralization that will take more and more things entirely out of the field of politics and put them back where they belong in the various economic, professional, and occupational groups.

I do not believe it will ever be possible to create in the present generation or in the future generations of Americans a sustained interest in politics. I think we are butting our heads against a stone wall when we preach against the marked indifference of the American citizen to politics. I do not believe you will ever get a concerted, radiant devotion to politics, certainly within the lifetime of any of us living. Why do I say that? Because I think we are passing out of the age of politics, and we are passing out of the age of politics because our political units and instruments have not been kept adjusted to the changing life of the modern world. This new nomadism that I spoke about a moment ago, this going about, this not staying in the same place and not having your interests in the same place where you are living, this new nomadism and this new industrialism have together created a generation of people who are essentially delocalized, whose roots are lifted up out of the soil, who are mobile, who are interstate in their thinking, excepting when by some transient appeal to state sentimentality, there is revived a fading sense of local patriotism, as was the case in the defeat of the child-labor amendment.

I believe these new facts, the facts that we are a mobile, nomadic people again and that we are a complicated, industrialized society, I believe that these outstanding facts of modern life call

for a wholly new political philosophy, for a wholly new notion of government, for a wholly new kind of statesmanship. When this new politics has been created, if it ever is created, I suggest that its broad lines will be somewhat as follows: I believe that in the fifty years ahead of us we will begin to see emerge a business statesmanship inside business, an industrial statesmanship inside industry, and an educational statesmanship inside the teaching profession. I believe that these unofficial and non-political statesmanships will give the nation the major part of its real government. I think our various state governments will be less and less regarded as sources of policy, and more and more as merely local administrative organs with limited functions. I believe that in the day of the new politics of decentralization, our national government will do nothing politically that can be done, that can and will be done by the statesmanship of any one of these functional or occupational groups that make up our national life. And I believe that our political government will more and more become simply the impresario, the inspirer, and the guide and councillor of these unofficial and non-political statesmanships.

I shall be through in just about a minute or two. May I repeat that the real decentralization that we need is not the decentralization from a big political unit like Washington to a lot of small political units like our state governments, but a decentralization from politics back to the functional groups that are doing the work of the world and determining the tone and temper of life by the way they do it.

Let us not make a mistake, however. It is so easy, you know, to mistake a private wish for a public movement. Please understand that tonight I am trying to forecast what seems to me to be an inevitable evolution in the larger politics of America in the next fifty years, an evolution that I believe, as you will see in a minute, will be of profound significance to everybody that is interested professionally or non-professionally in the educational life and system of our country.

Keep this in mind: When I talk to you about a decentralization out of politics into this functional statesmanship, I am not proposing an effective program that should be put into effect by

executive order tomorrow morning. I do not believe that we are yet ready to have political government entrust too much to our functional groups. These groups have not bred enough statesmen in their own ranks. They have not broken the shackles of group selfishness and achieved large enough social vision yet.

Just as I was getting on the train, I had an amusing clipping handed me from the *Louisville Courier-Journal,* the editor of which was an ardent champion of states' rights, and evidently felt badly, right after reading the editorial that I had written on the subject of states' rights. And so he concluded an extremely sarcastic attack upon me as follows:

> So states' rights would be replaced by occupational groups' rights. State sovereignty would be buried, as well as dead, while occupational group statesmanship would be supreme. We should be governed, not by ourselves, not even by our bureaus at Washington, but by our occupational groups—by our plumbers' groups, our tailors' groups, our free-verse groups, our free-love groups, our hole-in-the-wall groups, our magazinists groups, our "smart Alec" groups, and most of all—is it not so—by our "intelligentsia" group.
>
> It is a wonderful scheme Mr. Frank has conjured up; a weird wake he holds over the corpse of states' rights.
>
> Mr. Frank, by the way, is the latest editor of the *Century.* Perhaps it is well for the magazine that he is one of those editors who signs his editorials. Having affixed his autograph to this new plan of government, it will be credited less as a *Century* plan, than a Glenn Frank plan, which no doubt will be satisfactory to both the magazine and the editor.

I read that vicious attack on me, on the position that I have taken tonight again, with the quotations that I have taken from the April editorial, in order not to oppose what he has said, but very largely to agree with what he said. Evidently by condensation I did not make clear what I meant.

Tonight let me clarify that by saying that we are not yet ready for that kind of decentralization, certainly not in a very rapid way, that I have outlined tonight. I would much rather trust the average politician we get by shaking a box on election day, I had much rather trust the average type of politician in America, than to live under a country that was run by a sort of mutual cancel-

lation of effort between the plumbers, tailors, builders, and so on. I would much prefer that.

And the only way in which this or any other government can safely decentralize from politics is back into the occupational groups, which are after all the real thing, to conduct the affairs of their own groups, because they are on the job and they can help relieve us from this malady, this infliction we have had of people trying to run things that they know absolutely nothing about, which has been very characteristic of the political governments of the world for the last seventy-five or one hundred years without exception.

Our occupational groups, let us admit, have not yet broken the shackles of group selfishness, and have not yet developed men who have large enough social vision. And here is just where I think the professor and the educator, the university and the school system, come into the picture. If ballot-box democracy, such as we have in this country, is, at heart, a sort of conspiracy against the leadership of its superior men—and I think it is—then the hope of this democracy lies in the development through the right kind of education of unofficial statesmen who shall manage the businesses, the industries, and the professions of this nation with such socially minded vision and technique that in the next fifty, seventy-five, or hundred years, we and our children can afford to restrict political government more and more to the mere policing of life, while the real management of life goes on outside the halls of legislatures and capitols.

Here, I think, is the real political function of our state universities and of our school systems: the training of a race of unofficial statesmen whom we can trust to manage the life of society when society has passed out of the age of politics. But this will obviously involve a much more intimate relating of our state universities and our school systems to the current life of our states, so that the statesmanship of our university presidents in the future must be expressed not so much in "wire pulling" at state capitols, as in the development of a more realistic and statesmanlike kind of education that shall enhance and enrich the common life of our states as well as to help educate individual students.

GENERAL SESSION

SATURDAY, APRIL 4

FUNDAMENTALISM IN EDUCATIONAL PRACTICE

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We are passing through an era when the thoughtful man must constantly fall back upon his belief in the ultimate triumph of truth, if he is not to be continually worried or even discouraged. Education is being attacked not by the educated who would improve it, but by the ignorant who would destroy it. Such a state of affairs in a democracy is ominous for we are particularly subject to the evils of mob action. And when whole states attack education by passing laws that certain subjects shall not be taught, or when a group of educational leaders are stigmatized as "reds" because they have warned against the evils of ignorance, fanaticism, and intolerance, the situation is indeed serious and sufficient warranty for a careful investigation. It is always wise that such investigations begin at home, but from the nature of this situation there is no other place to begin. If the ignorant masses are attacking the educational system, a system which maintains the possibility of universal education, there is only one possible conclusion, the educational system must be failing. Else why are there ignorant masses? Fundamentalism in religion is in all probability a reflection of fundamentalism in education. The doctrine of evolution which is one of the foci for the present attack upon education has become both a test of education and a test of intelligence. For the masses, of course, it is a question of ignorance. For them it is all summed up in the question, Did man descend from a monkey? which they can only interpret as meaning that somewhere, sometime, a female monkey gave birth to a man. For those who have been educated to know what the theory really is, but who cannot understand it, and deny the possibility of its truth because of its unintelligibility, it becomes a test of intelligence. I

cite this merely as an illustration of many situations where as educators we have a right to ask ourselves, How does it happen that our educational system has not eliminated this ignorance?

The term fundamentalism has not yet found its way into our dictionaries. Etymologically it would mean the science of principles of fundamentals or foundations. Now there are no theories about foundations; the only question involved is what the foundations are. The only thing that can be discussed is whether foundations are adequate to support the superstructure or whether the principles involved are really fundamental. Present-day usage seems to compel us to conclude that a fundamentalist is one who accepts the traditions of the fathers as safe and sure foundations. Fundamentalism, then, would be the theories and practices based upon such a foundation. By fundamentalism in education we shall mean the acceptance as satisfactory, of methods, principles, and practices that have come down to us as traditions from the fathers. The writer is not a fundamentalist in education and therefore the object of this paper is to inquire whether there are not reasons to believe that many of the traditions of the fathers are so outgrown as to need to be discarded, or at least extensively modified.

Clinging rigidly to the traditions of the fathers, is conservatism. A willingness to give up some of the traditions for the sake of reasonable improvement is liberalism, while rudely smashing the old traditions for the sake of newly discovered fads and fancies, is radicalism. There are no radicals in education and very few liberals. The rank and file are conservatives. Those of us here assembled call ourselves liberals. That is a respectable term and does not brand us as extremists as does either conservative or radical. We may be willing to admit that we are radical in spots. In reality, we are merely liberal in spots, and mainly conservative. How much we adhere to the traditions of the fathers we probably do not ourselves realize. We are perfectly honest in thinking that we are very liberal, but let us take a little look at ourselves and our practices, and ascertain where we stand.

It matters not where we begin. Suppose we start on a tour of inspection. We will drive to the nearest school. We need no guide; we shall recognize the school-building as far as we can see

because it is the traditional building. No one has ever yet called a school-building anything but a school-building, because it has the traditional form and shape, and often a traditional color and size. And when we go inside we will not be disturbed, we shall discover the traditional arrangement, the traditional seats, and traditional appearance. We shall see the traditional teacher and the traditional pupils. They will be poring over traditional books in the traditional way, reciting traditional lessons, demonstrating traditional problems on traditional blackboards.

Let me interrupt myself long enough to answer that radio message which I just intercepted from some one who says that he can take us to a school where none of these traditions prevail. I am not denying that some of you may know the way to such a school, but we are not starting out on a personally conducted tour; we are starting out at random, and we all know that if we go at random we will find the kind of school that I am describing.

We may now proceed to examine a little closer this random school that we have happened upon. The teacher has undoubtedly received somewhat more training than used to be thought necessary. This, however, is not very manifest in her work, since for the most part she uses the same methods that her teachers used upon her, and uses very few of the methods that she was taught in her course in the normal school. Upon talking with her, we find that she has the same traditional group of children: some are good, some are bad; some are bright, some are dull; some are faithful, some are lazy. She goes at her work in the old traditional way. Her theory is that education is a drawing-out process, but her practice is that it is a pouring-in process. At this point I seem to interrupt another radio message. Someone is impatiently broadcasting the question, Why should we not be following the traditional methods if they are good, and why are they not good? The results are satisfactory; we are developing good men and women. To this I hasten to reply. There is much truth in what you say. We are doing many things well; we are accomplishing much, but perhaps our results are not as good as they might be. Let us examine.

For the school year 1921-22, we spent for education in our

forty-eight states and District of Columbia, more than fifteen hundred million dollars, and every dollar of that amount was for value received in honest labor. There was no graft, and there were no extravagant salaries. Similar amounts have been spent each year before and since. We have always been proud of our educational system, and for a generation or two we have been well satisfied with what we are doing. But subjective impressions are apt to be erroneous and only when we can get some kind of objective measurement are we safe and secure. Our real test of the schools is not whether they look well, not whether we are proud of our beautiful buildings, of our trained teachers, of our graded system, and all the other showy things that we can point to. The real test is whether we are getting what we want and what we have a right to expect.

And what do we want? I think we want to "prepare the younger generation to take the places of the older generation, to perpetuate and advance good living and high civilization," to quote the words of President Thompson of this University. The layman dismisses this question by saying that he wants his child to be educated. The question of course is, What is education? This is not the time to enter into a philosophical discussion of the answer to that question, but a few suggestions along that line will clarify the theme that we have in mind.

I presume that we would all agree that education and learning are not synonymous. A person may have learned a great deal, and yet be little educated because he has not learned the things that prepare him to take the place of a person "of the older generation, to perpetuate and advance good living and high civilization." On the other hand, the uneducated person is a person who has learned nothing, and *that* is an idiot, or even worse, because the idiot oftimes learns simple habits and a few meanings. From this we seem to be driven to the conclusion that our problem is not so much, What is education? as, What constitutes the truest or best or most efficient education? Creighton Miller says: "There are roughly two aspects to education. The one, the transmission of racial experience, the other the development of the individual psyche." At first sight this seems

to be a contribution to the problem, but upon closer scrutiny one discovers that while there are useful thoughts here, they are very far from being exact and satisfactory answers. The transmission of experience is certainly one element in education, but the problem is in no way solved by that statement, for the question is the same as before, What experience is it important to transmit? Surely the child neither can, nor needs to learn all the experiences of the race. He needs merely to learn those experiences that will be useful to him in his particular career, if he only knew what they were going to be. The other phase, the development of the individual psyche, is not to be questioned; it is to be denied. Here we are denying a fundamental, because it has been the tradition of the ages that we have much responsibility for the development of the psyche. In a sense, yes, but in the traditional understanding, no. The artist develops his work; the painter, his picture; the sculptor, his statue; but the gardener does not develop his plants. They develop themselves; he merely feeds and protects them. The living organism contains within itself the determiners of its own development. It only requires food and a certain amount of protection. The human organism is no exception. This change of viewpoint does not take away the teacher's opportunities, though it will often change the character of the work; for this means that we do not develop a child as the machinist develops an automobile. It means that we cannot force a child into a particular mould and call it education; it means that the only thing we can do is to furnish him with the requisite protection and with the right kind of food, mental as well as physical, and let him develop as his own internal energies determine. But more of this later. For the moment, we want to get back to our first question, What do we want the schools to do for us? And again I repeat as the best answer available the words of President Thompson: we want "to prepare the younger generation to take the places of the older generation, to perpetuate and advance good living and high civilization." And now we come to our crucial test, Are we doing it to a high degree of efficiency?

Civilization is a much abused term. But it means essentially

a highly organized group of human beings living together in peace, harmony, happiness, and efficiency. The teacher often describes his work as the process of making good citizens. That is true. It is a process of preparing the younger generation to take its place in the civilization of the time and do its part for the already-mentioned purposes. If any youth does not do this as he comes to maturity, it must be agreed that in his case education is a failure. Now we are ready to apply the test to our schools. Are there any failures? Are there any people coming out of our schools who do not contribute to the perpetuation and advancement of good living and high civilization? I pass by, as too trivial to have anything to do with our problem or to require an answer, those periodic outbursts claiming that high-school graduates cannot spell and that college graduates are impractical and incompetent. We shall consider rather some of the topics connected more directly with good living and high civilization. In other words, if we were to set out to improve the conditions under which we live, or our social customs and practices, what are the unsatisfactory conditions that we would strive to improve?

Three or four years ago, William Allen White asked the question, "What is the matter with America?" and answered it in three words, "the moron majority." In what sense the school is responsible for the moron, we will consider later. Many people agree with White and cite us typical moron groups, the anti-vivisectionists, anti-vaccinationists, anti-evolutionists, religious fanatics, the Ku Klux Klan, and other forms of narrow sectarianism. While this would be a perversion of the term moron, nevertheless these groups are clearly evidences of the failure of education. Passing these, however, without further discussion, let us consider three rather large problems, crime, health, and business efficiency.

That there is an enormous increase in crime is agreed by all. At the present time it is difficult to say how much of this is due to the disturbance of equilibrium that resulted from the war. But if we take statistics before the war, we escape that unknown factor. In Ohio in 1906, the total cost of crime and delinquency was $4,600,098. Eight years later in 1914, it had increased to

$8,412,000, or nearly double. During the same period, the felonies in Ohio increased from 4,039 to 8,079, exactly double. During the same period, the population increased only ten percent. In other words, during this eight-year period, crime increased nine times as fast as the population.

Let us look at the question of health. In spite of the wonderful strides of scientific medicine, in learning how to cure many diseases and practically to eradicate others, we are nevertheless finding it necessary to enlarge our hospitals enormously. If we take the topic of mental diseases alone, we find that every hospital for the insane in the country is crowded and nearly every state is building new hospitals for this class of patients. Fifty thousand new admissions each year with a total hospital population of over two hundred and fifty thousand. In 1880, there were eighty-one people out of every hundred thousand of the population insane. In 1890, the number had increased to 112 per thousand of the population. In 1904, it was 183; in 1910, 204; in 1918, 217; in 1920, 220.

In the matter of business efficiency, I do not have any statistics to offer, but if one may rely upon the statements of leading business men, the condition here is no better. Within a week, a business man said to the writer, that he could start ten branch stores at once, he knew of desirable locations, the capital was available, the stock was ready, but the difficulty of getting men to manage these stores was so great that he was unwilling to undertake it.

Someone asks if it is fair to lay all of these difficulties to the school. It is not our intention to blame the school for all of these evils, but here is the situation: we are a community of people; we are suffering from these so-called evils. In looking about for help, we ask, Cannot the school system help us in some way? In other words, it is not a question of blame, but a question of public policy and of possibilities. Shall we not try to solve these problems, partly at least, through our schools? And secondly, if we turn it over to the schools, what will they be able to contribute? As to what can be done; I do not presume that educators will deny that much might be done along all these lines: that

we could train young men and women of the right degree of intelligence in such a way that they would easily become competent business executives.

Some might be inclined to question the ability of the schools to do much in the way of combating disease and especially insanity, because of the rather prevalent notion that these are necessary evils; that insanity, for instance, is largely a matter of heredity. But if such doubters will consider the present-day doctrine: that many physical and mental ailments which cannot be cured might have been prevented; that even insanity is not hereditary; that we merely inherit a weak nervous system, and that the possession of such a system only means greater care, and that children can be taught to care for their physical and mental health to such a degree as to reduce enormously the number of sick people; then the doubt disappears and we agree that here too the schools might do much if they were properly constituted.

In the case of crime, we shall probably meet not only doubt, but definite denial that there is anything that the school can do in this matter. We have tried from time immemorial to make good boys out of bad boys and "it cannot be done." Some boys are inherently wicked. Many a boy has had the best of treatment and still persists in becoming a criminal. Such is the attitude of many teachers as well as others. Nevertheless, modern study and investigation are gradually demonstrating that this is probably an erroneous view. Inherent wickedness, criminal tendency,—there is no such thing. There are inherited tendencies that will lead to wickedness and crime if not corrected, but the tendencies themselves are neither wicked nor criminal. In the words of Paul, "Where no law is, there is no transgression." Therefore, if we by our laws have made the natural activities of the child, crimes, should it not be our first duty to have him understand our regulations and the reasons for them. Appropriating to one's own use whatever one discovers and conceives may be useful, is a natural instinct. It is the hoarding tendency in animals, and in young children, but in an organized society, wherein the members are mutually dependent, such a practice becomes a vice, and we call it stealing. And the child must be trained not to steal. So with

lying, so with sex indulgences, so with all the other violations of laws, ordinances, rules, and regulations.

At this point, a fundamentalist reminds us that this is the business of the home and not of the school. Moreover, this has a basis other than tradition. Such teachings should begin before school age, therefore, the home is the only place for them. Nevertheless, we must not forget that it is the community that is most interested in having this, that we call moral conduct, brought about. It is, therefore, to the community's interest to see that this is accomplished somehow, and if the home does not do it, then it becomes necessary to discover some other agency. And next to the home, it would seem that the school is the best fitted. But, persists our objector, why should not the home be compelled to do it, to which the all-sufficient answer is that the majority of homes has not the ability. We forget that as a rule, homes are as defective as the children.

Assuming without further arguments that we decide that we should turn to the school system for the remedy of a large part of the evils enumerated, our next problem becomes: How are we going to accomplish it? The curriculum is already crowded and what we are asking takes much time. This brings us face to face with the question whether the traditions of the fathers in school work must not be largely given up, and new constructions put in their places. I think if one may venture to interpret the handwriting on the wall, that that is the struggle that is now on. Thomas Jefferson voiced the sentiment of 1776 when he declared "we hold these truths to be self-evident: that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness." While Henry Fairfield Osborne speaking in 1921 declares "The true spirit of democracy that all men are born with equal rights and duties has been confused with the political sophistry that all men are born with equal character and ability to govern themselves and others and with the educational sophistry that education and environment will offset the handicap of heredity." Thus one of the fundamental concepts of democracy has to be modified when it comes to education. Although we have

long suspected this, we now have exact data. We know that the capacity of the children in our schools extends all the way from those who cannot do first-grade work, up to those who can go through high school, college, and university. We know the percent that will stop at each milepost along the way. Furthermore, each school system may know the individual pupils who will attain to the various levels of accomplishment. These data constitute a new foundation for educational procedure. On that foundation it will be possible to establish an educational practice that shall preserve all the good things that we are now doing, and in addition contribute to the problems already enumerated which are so essential to the life of a democracy. Because this is fundamental it will pay us to devote some time in an attempt at least to outline the procedure that will be necessary.

The trainers of the feeble-minded have long had this as one of their fundamental doctrines, "The true education and training for girls and boys of backward or feeble minds is to teach them what they ought to know and can make use of when they become women and men in years." We are beginning to accept that, in theory at least, as true for all girls and boys. In practice it must be admitted that we are far from it.

First, we have this fundamental fact that the American democracy of the present time is divisible into the following groups of intelligence. Approximately 10 percent do not get beyond the intelligence of ten-year-old children; fifteen percent attain to the eleven-year level; twenty percent, twelve-year; twenty-five percent more, to the intelligence of thirteen and fourteen. In other words, 70 percent of the population could not get beyond the eighth grade in our schools as now constituted, no matter what opportunity they had or how long they attended. About sixteen and a half percent more have the intelligence of fifteen-year-old children, while 9 percent have intelligence of children of sixteen and seventeen years of age, and lastly four and a half percent attain the level of eighteen and nineteen years. The fifteen-year level will be largely limited to high-school capacity, while the last two groups are capable of college education or its equivalent if they do not go to college. The contrast, between these facts

and the traditions of the fathers that every child has the capacity to become a president of the United States is revolutionary. We have begun to take a little account of these facts in some favored spots where we have established classes for the dull and backward children, and in a very few places have also established special classes for the brilliant. But unfortunately this procedure is still the exception and, taken by and large, our educational systems are still attempting to give to the child who is going to stop his education with the third or fourth grade the same training as the child who is going to high school or even to college. The expensiveness of this erroneous procedure is beyond estimate. The cost in dollars has been partially indicated by that master of statistics, Leonard P. Ayres, in his study on the *Money Cost of Repeaters*. But the expense is far more than the money cost. It includes the expense of time, the expense in the morale, and disposition, and happiness of the teaching force, the expense of the lost opportunity, of turning children out into the world without any ability to use the limited mentality that they possess because we have insisted upon their doing those things for which they have no capacity. Moreover, this waste is found in connection with the lower levels of intelligence. When we consider the higher levels of intelligence, we have the enormous loss that results from failing to take advantage of the good endowments of these children, by giving them an opportunity to acquire all the training that their mental capacity would permit.

I cannot refrain from emphasizing this point by reading to you a letter which describes an actual experience. This was not prepared as a pedagogical document but is merely a personal letter written by a friend, an intelligent mother, who has a small boy in one of the best schools of the country. Moreover, it is presented not as an isolated case but because it is probably typical of what is being done more or less extensively the country over. She writes:

> Dear Emmy:
>
> You will be so pleased to know we have placed Joey where he will get the benefit of all the new methods of education. They

have added the first year to the Normal School and Joey is there "with bells on."

It is really remarkable how they approach the child and dispense knowledge. The idea, as you know, is not to let the child have any comprehension that he is getting an education. This is done, I am told, so that he will never know he is being taught anything; and thus prevent his hating school.

The atmosphere in this room with a small group is lovely, plenty of sunlight, flowers, and pictures, and blocks. There is music, and rhythmical steps, and an interpretation of movement in music. I regret to state that up to date Joey has not gotten this; he is slightly heavy on his feet. Having gained considerable during the summer, his attempts are slightly "hippo" in tendency, but he is "game" and seems willing to try anything more than once for art's sake.

He is allowed to count all the children and copy the number down on a piece of paper—in order that he may not forget it—and is then allowed to carry the note to the floor below and with the assistance of other children carry a quart bottle of milk to his own room. You can readily see how that sort of treatment gives the child confidence in himself!

He is also allowed to make up his own little "grace." "Children when allowed to develop naturally have such beautiful thoughts and are so original in their religious expression." We have, however, found it necessary to eliminate this "grace" outside of school hours for he considers it exceedingly funny at his home table. I have just learned that he substitutes an *h* for a *G* when he can get away with it. The beauty of thought is there when he will say it right, I must admit that, but he is a bit uncertain. You know he is only six and too much cannot be expected of him!

He is taught language in a very wonderful way, one child after another is allowed to rise and tell something about himself or what he has done. The other children are allowed to ask any questions or correct any grammatical errors. In this way, Joey has added to his vocabulary several rare and unusual words and phrases such as "I seen," "I done," "haint," and "aint," "me hat," "I gotter go," "shut up, you dumb bell." The virus of "aint" has gone deeper than any other vaccine thus far. His teacher is a charming girl with a beautiful flow of language and is slowly endeavoring to correct these errors of speech, but is, of course, extremely careful not to destroy the thought for any purity of diction. Sooner or later, Joey will note the difference between the teacher's and the children's English, and, of course, choose the latter.

His number work up to date is counting up to ten on his fingers. Thus he spends many hours of the week making valuable combinations of ten fingers. Soon they are going to learn to count as high as twenty with colored beads. Also Joey is learning to recognize the figures, cut them out in squares, and paste them in rotation.

Soon the children are going to print their own names with the printing set and the names of a few objects they may choose, copying from the name under the object.

As yet he has not progressed very far in music. "No individual songs are taught at so early an age, the age for developing tunes comes later."

You can see how beautifully the children are unconsciously being led into the field of knowledge. The whole school atmosphere is simply wonderful, and the children who are allowed to attend are fortunate.

However, all good things must end, and he is all through his school at twelve o'clock and must depend upon himself for the balance of the day; in his leisure time he must direct himself. This is the way he spends it undirected. He comes home alone across one car track and one bus line and reaches the house about one-half hour before luncheon. Gets a ball and begins bouncing it, counting as he bounces, his record at this on his own audible count is often a hundred without any effort. He has added previous counts and made it two hundred in number.

After luncheon when the older boys are home, he plays "hide and go seek" and counts five hundred by fives or tens according to the rule.

He finds a card which he desires and prints his name on it. He is sent to any store and brings home packages without the errand being written.

He can come up from the center of the city alone and get off at his own corner. During the summer he went fishing at the bay with a boy his own age and bought ten cents worth of bait on the way. He can bait his own hook. He catches crabs, takes them out of the net and picks them up, without assistance, and without damage to himself or crab. He will turn a cart wheel or handspring with ease, sing accurately "Barney Google" or "Yes, we have no bananas" with all due respect to the tune.

Wearied after an afternoon of exercise he throws himself on the floor and plays a game of solitaire—the Canfield variety. After dinner he plays "Mah Jong," and plays an excellent game. He

learned it from children this summer without our knowing it. He counts his "wall," at least a part, in twos. He can teach the game. His remarks are, "You better keep 'three of a kind' than a 'sequence' cause 'three of a kind' scores and a 'sequence' doesn't." "If you discard don't discard your own 'wind' cause that counts four and doubles your score." "You can be 'Mah Jong' but somebody can play to score and beat you." "'Flowers' count four and two 'flowers' make you eight score." He plays quickly and with judgment.

He knows his way around the Museum of Natural History, can tell you on what floor the dinosaurs are kept and where to find the Indians or Roosevelt's elephants, and can show you where he lives on a small globe of the world. He knows the meaning of Buddha and jinrikisha, and can dive head first through a breaker twice his height and come up smiling.

After taking his own bath and dressing for dinner, with a game or two of Mah Jong, he "calls it a day." Arises smiling next morning and dashes off, over bus line and trolley track, to absorb unconsciously, in this rarified, simplified infantile atmosphere, these tiny assinine specks of predigested knowledge!

YE GODS! THE PITY OF IT! If these children were gifted as cats with nine lives 'twould be all right, but they have only one life time to learn. "I'll say" this saccharine method, Emmy dear, is fine but it's really too sweet for even a moron to take indefinitely. "It's a great life if you don't weaken," and I can see Joey getting back to the old-fashioned methods of work he can accomplish, which has for its basis the same intelligence which he chooses for his play.

Now that I have exploded on this assinine method known as "natural education," I feel much better. Sonny, at the age of nine, is doing large problems of long division and reading the *New York Times* all summer, such news as the volcano in Italy, details of the earthquake in Japan, and giving the dimensions, speed, shape and course of the ZR-1 plus a knowledge of the relative positions of all countries of the globe all of which was obtained by three hours per day of real concentrated work, five days a week, eight months a year, making two years altogether of school life.

How long do you suppose it would take Joey to get that much at the rate he is going? The State would have to give him an old-age pension before he finished long division at his present rate of education.

Joey needs to be in a special class, for it is too much to ask that he be given an opportunity to learn as much in school as he is learning outside of the school.

There are two objections commonly urged to the special class. The first is the expense and the second that such procedure is undemocratic. The question of expense might be considered from several angles. Time will permit us to touch upon only one or two. First, it is far from certain that special education if thoroughly organized would be more expensive than the present system. Indeed there are reasons to believe that it would be less expensive. The money saving already referred to, resulting from the great waste of time trying to teach children things they can never learn, might of itself pay for all the extras in other directions. But even if this is not the case, there is much evidence that the people in our democracy are not unwilling to pay for things that they really want. The people will undoubtedly object to paying more for education until they discover that they are getting more in return. And when we are able to give every child an opportunity to develop his own peculiar talent to the fullest extent, we will be giving the people that for which they will pay liberally. The objections that special classes are undemocratic seems to hark back to the old concept that all men are created equal in capacity. Viewed from the standpoint of the diversity of mental capacity the special class is the only truly democratic procedure because democracy, whatever else it may mean, certainly means equality of opportunity, and under the present traditional system there is no such equality. The bright child has no opportunity to develop his gift, and the dull child has no opportunity to learn those things that he might learn.

The value of the traditional methods may be tested also from the standpoint of illiteracy. We realize that this is a term which is somewhat variable and uncertain. Nevertheless, in a general way it gives an idea of the situation. The United States is probably spending a larger amount per capita for education than any country in the world. Its investment in buildings, sites, libraries, apparatus, furniture, and equipment averages $149 per pupil in attendance. In addition to that, the average annual expense for

instruction and so forth is $64.16 per pupil in attendance. Nevertheless,

> The standing of the United States among the leading nations of the world with reference to illiteracy is not flattering to our pride. Our rank is tenth with an illiteracy percent based on the census of 1920 of six percent, while Germany and Denmark lead the list with a percent of less than two tenths of one percent. The next highest percents to ours are France 4.9 percent, and England 1.8.

It may interest you to have the corresponding facts for the State of Ohio. Ohio has an investment in buildings, building sites, libraries, and apparatus of $134.00 per pupil enrolled, to which is to be added $165.69 per pupil in attendance for the annual expense of instruction and so forth. With this outlay, Ohio's percent of illiteracy is 2.8 compared with the 6 percent in the whole United States, but there are fourteen states that have a lower literacy percent than has Ohio. Dr. Henry S. Pritchett, president of the Carnegie Foundation, in his *Seventeenth Annual Report,* has this to say:

> The conception that the public school is an agency in which any child may be taught any subject is fundamentally unsound, and leads to expense beyond any man's ability to estimate.
>
> As a result, the schools are over-crowded with ill-prepared pupils who think they are going to obtain something which the school cannot give them, whose happiness and usefulness should be found through other means. Both financial necessity and educational sincerity require that those who are responsible for public-school education shall return to a feasible and educationally sound conception of the school. That they shall frankly admit what it can do and what it ought not to attempt, and that they bend their efforts to carry out those things that are feasible and necessary. Financial solvency and educational sincerity are to be found along the same path.

Dr. Pritchett's well-known opposition to the public school compels us to read into his utterances points of view which we cannot accept. We have introduced the foregoing quotation because it is such an excellent example of an intelligent man glimpsing a wrong, but not understanding the explanation. Let us examine it a little more closely in the light of more recently

discovered facts. The conception that the public school is an agency in which any child may be taught any subject is fundamentally unsound, not because "it leads to expense beyond any man's ability to estimate;" but because, as we now know, the distribution of intelligence among children is such that large numbers of them cannot by any possibility learn the things that we attempt to teach them. In other words, Dr. Pritchett without appreciating it, is voicing an attack upon "the tradition of the fathers" that all children are created with equal mental capacity. As a result, the schools are "over-crowded with ill-prepared pupils," ill-prepared, not because some teacher down along the line has failed to do faithful work, but ill-prepared because they are by nature ill-endowed. Their happiness and usefulness should indeed be found through other means. Better say, another curriculum. An "educationally sound conception of the school" is greatly to be desired. We ought to come to some understanding of what the school can do and what it ought not to attempt. We should bend our efforts to carry out those things that are feasible and necessary. It is quite probable that most of us would not agree with Dr. Pritchett as to what things are feasible and necessary. Indeed, one of the difficulties of the situation is that we are not agreed among ourselves on that point. Indeed this is a very difficult problem. Sequin found that the idiot could be educated, but it was not feasible because to do so would require the entire time of an intelligent man, which the results in no way warranted. There are many teachers today who are misled by the argument that a child ought to be taught whatever he can learn, ignoring the fact that some things are learned at too great an expense and many things that are learned at even moderate expense of effort are never used sufficiently to warrant even this light expense.

It would seem that in education as elsewhere a careless or unreasoning acceptance of the tradition of the fathers may render the system relatively inefficient and materially interfere with what should be normal progress. To persist in the pedagogical sophistry that education and environment will offset the handicap of heredity, to quote again from Dr. Osborne, is to declare ourselves

educational fundamentalists, and will bring education into disrepute through failure to accomplish what we have promised to do.

> New times demand new measures and new men;
> The world advances, and in time outgrows
> The laws that in our fathers' day were best;
> And doubtless, after us, some purer scheme
> Will be shaped out by wiser ones than we,
> Made wiser by the steady growth of truth.
> —*Lowell*

THE FAITH OF THE FOUNDERS

WILLIAM MCANDREW
Superintendent of Schools, Chicago

Fellow Citizens:

The subject of my address is one that requires particularly close attention and hard thinking on your part. As I have sat there for an hour and a half, and as many feet are asleep already, and I hate to have that carried on up towards the other end, I am going to ask you if you will do the speaker the favor of standing up for a few minutes and speaking to the man on your right and the woman on your left and ask them how they are, and say you hope they are well.

Dr. Goddard began with reference to pessimism. I saw the copy of a letter that was written by a Philadelphian on the fourth of July, 1776, that contained this interesting statement: "This country is going all to pieces" — July 4, 1776! All the intimate narratives of the Revolution contain references to some of the most pessimistic times in history—neglect by Congress of its troops, failure to support important expeditions that had set out, distrust of everybody. Among all these stands out the optimism, the confidence of men like Washington, Franklin, Jefferson, Adams, Monroe, and Madison, which leads us sometimes to think that the reason why those names are enshrined in the memory of America is because they had faith. They were not overcome by the pessimistic attitude, or by the disappointing, discouraging state of affairs.

All the men that I mention expressed one particular line of belief. It was this: that to preserve that which had been won with such expenditure of strength and blood and treasure for succeeding generations, it was necessary to direct attention to establishing a system of public schools. Washington based his recommendation on the fact that we must no longer be governed by the inherited brains of the few, such as Dr. Goddard referred to, but that this must be a government which depends upon public opinion, that to preserve us, public opinion must be enlightened; for that reason, he said, there should be a system of public education to preserve the nation.

Adams' idea was that men must be trained as a part of the government service, in their moral and civic duties as men and citizens, and so Jefferson, so Monroe, so Madison. So all the founders of the republic, and so down through the history of it, all the eminent men who have given their attention to the preservation of the Union base its continuance on good schools.

In Massachusetts, Webster; in Pennsylvania, Thaddeus Stevens; in America, a long line of statesmen, with Horace Mann in the lead: Lincoln, Harding, Roosevelt, Garfield, Wilson, Coolidge echo this proposition. The way the republic is to be preserved is by means of public education, the first resort, the last resort, to secure that which Dr. Goddard repeatedly stressed: the preservation of our American brand of civilization.

Another curious feature of the faith of the founders is their frequent statements as to the length of time they expect this republic they set up to last. Jefferson's favorite phrase was "in perpetuity." Washington at various places expressed the belief that the "republic will last forever." Each one had his favorite phrase. One of the most poetic of all was Adams' "From age to age till time shall be no more." All of these leaders, their followers, the intelligent people of the time, declared that the means by which the perpetuity of the American nation would be secured was by a system of public schools, a part of the government service, teachers as government agents, as much as generals are, or soldiers or postmasters or senators or governors.

The first opportunity that came for Congress to put these ideas

into actual effect was not immediately after the signing of the Declaration. Why did they not make education, feeling so strongly as they did about it, a national affair? Apparently it was because of their belief that no powers should be taken from the state which could be entrusted to them. Massachusetts must look out for the education of citizens for this American republic; Connecticut, the same. Each of the states must take care of this service. That seems to have been the opinion of the makers of the Constitution.

The opportunity that came, however, to put these ideas into legal effect is one that concerns you very deeply, because you are inhabitants of that portion of the Commonwealth in which the doctrine was first applied. You will recall the original Republic consisted only of the thirteen colonies and their possessions to the north where the State of Maine now is. The United States was east of the Allegheny Mountains. You remember that England had won this western territory, in which you now live, from France in the Seven Years' War. You recall and you teach your children that Thomas Jefferson and other Virginians got behind an expedition which they organized and outfitted. They sent into this territory, a sturdy company under John Rogers Clark which captured the forts of the British, and so won this land for the new nation.

A proposition came up, as soon as the war was over and soldiers and their families and other settlers were pressing across the mountains to take care of this new possession, to give it suitable laws. The first one who addressed himself to its government was Jefferson himself. He drew the Ordinance of 1784. In it he provided that there should be no slaves in this territory; that it should always belong to the United States; that it should never secede; there should be no religious persecution in it, no test of a sectarian nature for the holding of office, no fixed form of worship; and that it should be divided into ten States, on which he settled the names in accordance with the classical habit of the time Polypotamia, Metropitamia, Cheronesus, Sylvania, Michigania, Illinoia, etc. For some reason or other the Ordinance was not passed. See what you escaped in the way of a nomencla-

ture. The reason usually attributed is that the Southern states, although Virginia was willing, would not pass an ordinance which forbade slavery in this new possession of the country.

Then was organized the Ohio Company for the purpose of promoting the settlement of this region, and especially to see that the soldiers of the Revolution were given an opportunity to begin a new life, to obtain land here at nominal prices, and to bring about a loyal population belonging to the original little nation across the mountains. The Ohio Company was so successful in its colonizing that Congress again felt it necessary to take up the organization of the Northwest Territory, out of which Ohio, Indiana, Illinois, Michigan, Wisconsin, and part of Minnesota were finally formed into states.

This time Jefferson was not on the committee. He was absent in France as the envoy of the United States, but his ideas were written into the next Ordinance, the famous Ordinance of 1787, which was drawn by Edward Carrington, Richard Henry Lee of Virginia, and Nathan Dane of Massachusetts. It was presented to the Congress and adopted. It provided that these lands would forever be a part of the United States, would never secede, that there should be no slavery, that there should be no religious test for holding office. They did not get universal suffrage at first. One had to own fifty acres of land for this. But as land was selling at sixty cents an acre all through the Territory, the hardship was not particularly great.

The most famous, the most striking part in the Ordinance, however, was that provision which the Congress made for carrying out the big idea of Washington, Jefferson, and the others that the nation was to be preserved by a system of public schools. The Congress, therefore, set aside large tracts of land in each township, the sale of which was to go to the support of education. They expressed their idea in this old law, under which you and I still live, in these ringing words: "Religion, morality, and knowledge, being necessary to good government and to the happiness of mankind, schools, and the means of education shall be forever encouraged."

It should be written in the high schools and in the universities

of Ohio, Indiana, Michigan, Illinois, Wisconsin, and Minnesota. It should be used as a text over and over again in order that our young citizens may understand the fundamental law which we still must observe, that religion, morality, and knowledge are necessary to good government, that religion, morality, and knowledge are necessary to the happiness of mankind, and that in order that religion, morality, and knowledge, which are necessary to good government and happiness, may be secured, we must encourage public schools and teachers, teachers being the means of education.

That is the fundamental law under which we, as government officials in the states carved out of this original Northwest Territory, are serving and must serve. It satisfies what the original idea, the idea of those political fundamentalists, those educational fundamentalists, was as to our duty as public servants, namely: to encourage, to provide, to teach religion as a public service, as a public-school subject—to teach religion, and to teach morality, and to teach that knowledge which is necessary for good government and for the happiness of mankind.

What was that Dr. Goddard spoke about to you just now? "Radio messages" that came to him everytime he looked out on some faces and saw doubt upon them? When I spoke of its being the legal requirement on our public-school system to teach religion, I saw the evidences of a contrary radio coming in. I wonder why it is? It is because there immediately comes in your minds a narrow definition of religion, a conception of religion as the ritual or the particular dogma which marks the Baptist or the Presbyterian or the Catholic or any of the religions which persist in modern times and are found among you. The idea that religion is the dogma or is the ritual immediately prejudices you against the teaching of it in the public school. You have a legitimate quotation from another part of the Ordinance which says there should be no restriction of religious belief and no requirements of any particular religious belief in order to hold any public office, such as that of a teacher in the public schools or a professor in a state university.

The difficulty comes from a narrow definition of religion, not

intended by the framers of the Ordinance, and not accepted by you when you give the matter a deeper thought. What we mean here by religion is that body of principles, that rule of conduct which has to do with the right relation of one person to his fellows and to the preservation of his own character as it ought to be preserved. A good definition of it was given by James, who was a brother of Jesus. James' definition of religion pure and undefiled: "To visit the fatherless and the widows in their affliction and to keep himself unspotted from the world." Analyze it. Look at the two ideas of the religion which can be the religion of you Baptist woman, of you Presbyterian man, of you Catholic, of you Episcopalian—religion pure and undefiled, to visit the afflicted. Generosity the basis of religion, doing something for somebody else who needs assistance.

Look at the other part of it, "and keep himself unspotted from the world." Keep his soul clean. This religion is the cultivation of unselfishness, generosity towards others, lack of greed for oneself. This idea of religion was what could be accepted by Washington, by Jefferson, by Carrington, by Dane, by Lee, by the framers and adopters of the fundamental law under which you live: generosity, visiting the afflicted and comforting them. Generosity—what does it mean? Analyze the word. What is the most important—"osity" or "gen"? Why, "gen," the first part of it, of course. "Gen" is in a fine, healthy family of words: "genuine," "gentleman," "ingenuous," "genial." It means the race, the breed, people, everybody. Generosity is the feeling towards other folks, towards our people, and towards other people.

That, then, away back in 1787, said those who established the work which you are doing, is your business and my business—to promote the desire of service to others, to teach this religion in schools: the American religion, pure and undefiled, is to visit the afflicted and to keep unspotted from the world.

The representatives of the public-school system of Ohio, like the representatives of the public-school system of Illinois and in all of the United States, have done more towards keeping themselves unspotted from the world than any class of Americans I could mention. With the ministry, the religious orders, and the

school people of America are the cleanest, most healthy-minded group of citizens we have, superior to business men, superior to other professions. You know that.

You, like me, have associated for years, more with teachers than with other people. You know that the typical man and the typical woman teacher, is a clean-minded, healthy-souled person. That is the hope of the salvation of our society in this flood of immorality that has come over the world in the last five or six years. This group of persons is remaining unspotted, undefiled by the world. They have maintained in the schoolhouses of this country a clean and healthy atmosphere for the young boys and girls that have come there.

But when they turn these boys and girls out of the schools and into the society of the present time, on to the street or send them home, what are the influences around them? If you walk from the school in which I was yesterday, about two blocks from it you see a glaring sign, "Should a Woman Tell"? Not far along you see another one, "A Night of Passion." Here and there throughout the town in which I live, and in the towns in which you live are these invitations to the children of our schools to make themselves spotted by the world, to get into their heads these vicious ideas which civilization from the origin of Christianity has tried to break down, and which it tried before, when it was searching after God, to get out of the minds of men, to get their thoughts clean and decent. Our society out of school is undoing what we are teaching in our schools.

Our children go home. What do they find? In the majority of the intelligent families known to me, the heads of them invite into these homes every morning or every evening the most eminent murderers of the day, the most notorious defaulters. They invite and hire, at the small price of two or three cents a day, to come into those homes the most notorious criminals. Father and mother get for three cents the salacious details of Mr. Stokes' search through the houses of prostitution to make inquiries as to the wrong doings alleged of his pretty young wife. Day after day they get that in these homes, to which you send children, children you are trying to keep unspotted from the world.

We had a boy up before the Juvenile Court the other day for going with three or four companions into a small department store in the suburbs and holding a revolver against the stomach of the owner, while the other boys went through the outfit and robbed it of its cash, and of those camping facilities, coats and hats and other things which they desired to take on an expedition. The leader was a young lad of fourteen years. The probation officer found that the father was dead, the mother a nagger. Each afternoon and evening Walter had gone to the nearest moving-picture house. There he had seen, with all the excitement that appeals to a youth of that age, scenes of murder, of shooting, of holdups, of adventure, of what he thought was the life of a real "he man." All he had to do was to get a revolver and do as these heroes did whom he had seen on the screen.

Have you ever gone to one of these shoot-up movies and watched the effect on the children who are there, with their natures overstimulated into a nervous tension? Have you ever seen this criminal teaching pouring into their minds, suggesting to them that this is the thing that makes a real hero?

That is not the worst of the situation as some of us see it. The papers in a large metropolitan city give an account of the formation of an immorality club in a high school. One must have committed an act of sexual immorality before becoming eligible to the society. The Immorality Club consists of thirty or forty young boys and girls in the high school, so say the newspapers. Investigation shows no foundation for the story. There was rumor of some wrongdoing by young factory workers in a disreputable road house out of the city. The mendacity of a newspaper reporter living in the town furnished him with the idea. He lies. His journal spreads the slander. The newspaper refuses to deny it, but goes into further false details saying that the parents are calling on the principal of the school and demanding an investigation. In fact, no parent has come to the school. The paper goes on to say that the school board is considering expelling all the members of the Immorality Club. But the school board had held no meeting. The whole sensation was made up out of nothing. It was an attempt not only to besmirch the town,

but to pick out the cleanest of all the agencies in that town and smear it over with lies.

In the Chicago papers, last week was an account of immorality in the high school of one of the little suburbs outside. In the Milwaukee papers was an account of immorality in a local high school. In both cases there was no foundation to the stories. In the Detroit papers there was an account of high-school girls and boys drinking cocktails and then retiring to bedrooms in a disreputable hotel, a slander absolutely without basis. In Denver, there was a statement in the papers of the closing for two weeks of a local high school in an endeavor to eradicate the sexual immorality in the high school. It was denied by all school officials. The school had not been closed a day. There had been no evidence nor charge of immorality in the high school at all.

This is what confronts us as school people in the attempt to keep our institutions unspotted from the world. Meantime, the allegations of continued immorality among our pupils increase by leaps and bounds, fed by the different papers, and by suggestive books. How in God's name can a disseminator of this damage in a territory established with intent of teaching morality, and religion, and the knowledge necessary to the happiness of mankind, gain a circulation or get into the homes of children whose parents are awake or who care for their own?

How do these things affect you? How does the enumeration of the increase of dseases which Dr. Goddard gave, the enumeration of the increase of crime in America which he recited, how does it strike you? Does it discourage you? Does it make you want to quit?

I knew a man once who guarded a levee. His business was to see that the embankment was kept up high enough, so that the floods of the river did not come over. The river began rising and came beyond what was considered by the tender of this levee as a reasonable height. He quit the job, saying, "If that river is going to behave like that, it is not showing due respect to me. I quit right here."

Do you remember once we had a Secretary of War, who is

reported to have gone to Roosevelt when the Spanish-American war broke out, and to have said, "This Department of War was working all right, everything was regular, everybody was doing his job in good shape until you brought a war on us."

When you and I hear of certain things that are alleged as being wrong with the children that we have to teach, or when you and I hear a list of increasing wrongs which we thought we were keeping down, what is the natural reaction that comes? It means, "There is more real work for us to do than we had realized. We are more seriously needed than ever. We are worth more."

Why is it that I have not been teaching more of this kind of religion, which means the duty of my children towards their fellows and the duty to keep themselves unselfishly clean? Why haven't I taught morality as a public-school duty? One reason for it is that I was brought up, as some of you, with an idea that the moral person was a dismal one, and that the more moral he was, the more disagreeable he was.

We used to have a convention of ministers that came to our town, twice a year. And when the conference was on, it was the duty of the brethren to take the ministers home to dinner. As I remember, we had six or seven good Methodist preachers come to our noonday meal. Every one of them would feel after having partaken of the dinner of the McAndrew family, that it was necessary for him to do something in the way of ministry. So they would lay for me. And I was a pretty decent sort of a chap, as boys go, about twelve years old. But one of them would catch me in the yard, and have a serious talk with me about my soul. He would no sooner leave me, than another one would get me and talk to me about giving myself to Jesus. Another one gave me something else. It formed the idea in my mind that a man whose business it is to promote morality is a disagreeable citizen. There are other young people that have that same idea. Those whose business it is to promote the idea of immorality for their own commercial gain keep to the fore the idea that virtue is dull. They indicate, particularly to our young boys, that to be decent and to be clean is to be a "sissy."

Sometimes I have known men teachers who when they get out with a group of merchants have a notion that they show manliness by contributing to the smutty, immoral tales which are told when the stories go around. They want to rank as regular fellows among "he men." It is foolish, because every business man, if he stops to think, knows that he expects the man school teacher to be cleaner and more decent than the ordinary man with whom he associates. Even the smuttiest-talking men, that you know, have their opinion of you fall if you permit yourself to participate in that sort of exchange of witticisms. They feel that when they send their daughters and their sons to a school, they are entitled to send them to an atmosphere which is morally clean, and where there is a man who is himself cleaner than the average. Instead of getting the reputation of being less manly, a man who refuses to take part in questionable story-telling gets a reputation of being more manly, because he holds his manhood up and will not cheapen it.

Don't you remember that there was somebody in a group where Grant was present, who said, "There are no ladies present, so I will tell you a good story." And Grant turned to him and said, "But there are gentlemen present." Now, if a rough old soldier like Grant could express an idea like that, how much more it behooves you and me, schoolmasters, to see that the right sort of moral atmosphere, as far as we can do it, is maintained. Never be ashamed of being clean and decent.

If I were going to build an archway over my head it seems to me that I would be proud if I could put it up so that every one of its parts would be clean and well formed. If I were a boat builder, it seems to be I should be proud if I could build a boat without a rotten timber in it.

Why it is that we get the notion that a man who has lived a clean and honest life may be ashamed of it is something I cannot understand. It dates back to the babyhood of the world. It comes from the old, wild, far-off time when the proposition was that if you want to be thought a real man you have got to commit some things that you are going to be ashamed of afterwards. The people who are holding up the opposite idea are the teachers.

Their business is to teach religion, morality, and knowledge, which are necessary to the happiness of mankind.

It is our duty, as it is our happiness, to see that in these troublesome times there is more direct teaching of morals to our young people in the schools. We must take pains as to the people who do it. There are some sad-eyed women and some forbidding men that I think we ought to deny the privilege of ever giving morality talks to the children. These sorrowful souls will associate the idea of morality with their forbidding, disagreeable characters. Our children say, "If that is what a good man is, I want to be a bad one." That is natural.

But if we can pick out, as any school that I ever knew can, those live, attractive, companionable men and women, who really care for the big things of life, and impress upon them that under the law by which we live in this Northwest Territory, it is our business to teach this kind of religion, I am convinced that they can do a great deal more than we have done so far, if they address themselves to it with an idea of making some result ensue.

I remember in the normal school at Ypsilanti we had a whole handful of that kind of teachers. There were Louis McLouth, Joseph Estabrook, Austin George, real sports, loveable men, genial men, generous men. Everyone of these took occasion sometime or another during our courses not to let us boys get out of that institution without realizing what it stood for in the way of a clean, healthy, hearty life, and without letting us realize that there was imposed upon us by having accepted at the expense of the State of Michigan that education, the responsibility to carry that idea still further.

I remember even to this day Estabrook's talks to the young men in that institution. They were so good that they are worth imitating even now in talks to the older children of the grammar schools and to the children of the junior and senior high schools. One of the first things that he overthrew was this old notion that it is necessary for a man's health that he indulge in sexual sin. Estabrook knocked it all to pieces by the reports of physicians, by statistics. The idea that a man should sow wild oats so as to develop his manhood, Estabrook scorned. He used to say, "Re-

member, there isn't any bacon theory of life, that you have a stripe of fat and a stripe of lean in your career. What you are is made up of what you do every day as you live, clean today, clean tomorrow."

Estabrook never cast his glances on the ground when he talked to us. He looked us squarely in the eye. Estabrook didn't make us think he considered scholarship our aim in life. But he made us think that we were promising young men, who desired and who aspired to a life of good citizenship. We were to recognize, just as a Democrat does when he goes into a Republican community, that he must stand up for his principles and that there is nothing degrading to him in doing so. Quite the contrary.

Estabrook emphasized to us the manliness of self-restraint. He told the story of Sir Philip Sidney, consumed with thirst, but whose self-restraint was such that he said to the person offering him a cup of water on the battle field, "Give it to that man. I will not take it." Estabrook spoke on the chivalry of self-restraint and said, "If anyone shall feel himself consumed with a sexual desire, let him realize the chivalry of self-restraint. Let him keep his own body clean and his own record pure, so that when the time comes, as we hope it will, when he will want to go into a life partnership with some fine woman, he will be able to have a fifty-fifty bargain and to say to her, 'I am giving to you as clean a life as I want you to give to me.'"

Away back in 1887, Joseph Estabrook taught the right kind of morality to the fellows in his school. He said this: "Nothing can be more degraded than a woman who has fallen to the profession of selling her body. Degraded as she is, no one can indulge himself with her without degrading her more. Nobody can degrade her more without degrading himself." Then, again, "She may not be anybody's sister, but she is bound to be somebody's daughter. The respect that every decent, chivalrous man has for a mother, whether she be his own or that of some careless woman, is the thing that this school and you boys stand for." He declared his faith that this was the sort of thing that we were for: for chivalry, for generosity, for consideration for the other people, for manliness, for the fair deal.

Then again he hammered it home in this way. "Your name is Thompson. Your name is Smith. Your name is Jones. Your name is Brown. Your name is Weatherby. That name is a sacred thing for you to keep clean for the pride of the Weatherby clan. Now, don't forget that when temptation comes to you boys, as it is sure to come, guard the family name."

Those are the straight things, the direct teaching of that kind of religion, which it seems to me that the fundamental law of this Territory invokes upon us. Now, shall I, an algebra teacher, who have convinced myself that I am hired for the purpose of teaching algebra, shall I teach morality? Why shouldn't I? The law requires me, wherever I am—in Illinois, in Ohio, in Michigan, or in the other states carved out of this territory—the perpetual law which says that "Religion and morality are necessary for good government and for the happiness of mankind," requires me forever to encourage education.

More than that, the very money which comes to me for my salary as a teacher of algebra is contributed not by persons who care for algebra at all, but is contributed by the tax rate of the entire community, the whole city and the whole State of Ohio, with some help from the United States itself. It comes to me not for the teaching of algebra, or of reading, or of arithmetic, but for the big ideas specified under the law, for that religion which I expounded to you, religion pure and undefiled, and for morality, and for the knowledge necessary to good government and the happiness of mankind.

There are men in this audience as old as Goddard. And Goddard told us that we are too old to learn anything new. Absolute nonsense. The time I heard Goddard not so many years ago, he didn't know nearly so much as he knows today. Or if he did, he didn't show it. To imply that you elderly men—but there are no elderly men present—to imply that you so-called elderly men and I are fossilized, having reached the point where we must be conservatives, and we cannot advance into new ideas is what the psychologists call " b-u-n-k. "

The very fact that we are being told by such a man as Dr. Goddard of the needs of the civilization of our time, carries with

it the intent that we shall change our ways and devote our attention more to the fundamentals requiring attention. By means of circumstances which can be easily explained we have neglected them in the past few years, due to the inclusion of a great variety of other new subjects which diverted our attention.

If I don't teach it, this manly morality, if we old men and you young women and young men don't teach it, who will? Whose business is it? Dr. Goddard said the homes cannot do it. They have not expert teachers. The criminal tables show that he is right. The churches cannot teach it as well as you and I can, because they get their pupils only once a week, and we have them five times a week. You cannot compel them to go to church. They can be compelled by law to come to us. The law itself shows that the obligation is on me, the algebra teacher, and on you, the manual-training teacher, to teach that religion and morality which is necessary for good government and the happiness of mankind.

If I do not teach it, and you do not teach it, who is going to make us? You know who is going to make us? We are going to be compelled by the people of the State of Ohio in legislative assembly. The tendency throughout the country now is for some legislators to think the crime record is getting greater, and that the lack of attention to morality is getting worse. They look to the agency which can cure this. Where do they always look? They look to the school. They go to the right place when they want a thing done and done efficiently.

Therefore, it seems to me, it is our duty to reorganize our schools before the legislature tells us what our duty is: to teach "Morality and religion, and that knowledge which is necessary to good government and to the happiness of mankind."

Do you know the reason why I have not done it the past three or four years, and why maybe some of you have not done it? It is because we do not know how. We have little in the normal school on the method of teaching morality and religion. We have something on our methods of teaching reading, methods of teaching spelling, methods of teaching these other secondary things, which are only a sort of help for building this higher idea of

moral conduct. We do not know how but we can learn how. Research organizations in this and in other universities can work out a method of teaching this religion, teaching morality in these schools.

I will tell you how you can do it easily. You can make a canvass of all the men that went to school under Estabrook. From them understake to get what Estabrook's method of teaching religion and morality was. Work it up into a pamphlet, get it into a circular. Let us put it into our courses of study.

Lowell—do you remember Lowell, a friend of Dr. Goddard's? Dr. Goddard ended his speech with him this morning; Lowell was asked by Guizot, the French historian, "How long do you expect your republic to last"?—a perfectly appropriate question for a Frenchman, who saw republics up and republics down. "How long do you expect that republic of yours to last." Well, Adams would have said, "From age to age, till time shall be no more." Jefferson would have said, "In perpetuity." Washington would have said, "Forever." Webster would have said, "To the end of time we expect this republic to last."

How long do you Ohioans expect it to last? You? You? How long do you expect it? Have you got faith that it is going to last? Do you remember there was something like thirty-five constitutions of republics which Jefferson studied before he worked on our constitution, and every one of those republics had gone down? Do you remember there was a Roman republic and a Roman empire? Where is it? What has been the cause of the decay of these social organizations of persons, nations, groups? What has been the cause? Decay of religion, morality, knowledge.

Every one of the sins forbidden by the Ten Commandments, except two, is a sin of selfishness.

How long do you expect the republic to last? Have you faith that it is going to last? Are there any Methodists present? You know what faith is without works. Dead. If you and I have faith that this Republic is going to last, and we do not get into our institution and lay those foundations for the persistence of our civilization, if we do not tackle what is before us now, the

increase of this light regard for the sexual relation, if we don't try to make our boys and girls realize that we stand for the clean life, and that we know what the clean life is, our faith is without works, and we are dead as far as any value of us to this territory is concerned.

That is the thing that impresses us, this thing that makes us realize that we, having enlisted in this service, want to make it count, and not to fiddle it away on Latin and Greek and algebra and geometry and reading and writing and salesmanship and all those things which lead nowhere unless behind them is the real American Ohio spirit of religion pure and undefiled, to keep these children unspotted from the world, to get them to do something for the afflicted, to train them up unselfish.

Let us be sons and daughters of Nathan Hale, the first distinguished American teacher, our Connecticut schoolmaster whose one regret was that he had only the one life to give. If I had a choice between Nathan Hale's life, snuffed out in a moment, and the choice of the life that is still open before you of giving the best of it every day to your country, with profound respect to the nobility of that young hero, I would choose you, because more can come out of you in your longer life of service.

If each day one realizes that he has done something towards making these youngsters appreciate and enjoy and look forward to a cleaner life than they have before; and if each day one has been able to show these children that the people that can look you straight in the eye without being embarrassed, are the people of clarity, of vision, the clean folks, the honest and unselfish folks,—you can make the State of Ohio over in a few years.

In one generation the teachers of Germany changed a peaceful, home-loving, art-loving, music-loving people into a wild horde of savage beasts, consumed with the desire to go out and kill. In one generation, the teachers of Germany did this. In one generation, the teachers of Ohio can perform wonders towards the realization of the faith of the founders, that we should have here good government and the happiness of mankind.

SECTIONAL MEETINGS

ART

J. R. Hopkins, *Ohio State University,* Presiding

STANDARDS IN ART

Henry Turner Bailey
Director, Cleveland School of Art and John Huntington Polytechnic Institute

Standards in art are fatal to progress. The history of art is largely the history of revolt, of protest against standards. Egyptian art was standardized and remained static for two thousand years. The portrait busts of Rome would have been impossible had Greek standards controlled the sculptors. Italian painting developed, because Byzantine standards were discarded. The Carracci standardize Italian painting; that would have been the end of the history of painting had it not been for the radicals in France. The history of art in France is a succession of revolts against Italian standards, classic standards, monarchial standards, academic standards—traditional standards of every kind. Art is created by free self-active individuals who follow the gleam.

Standards multiply the inanimate, perpetuate the commonplace, substitute machinery for brains and skill, and an imperialistic system for the freedom that makes us free indeed. Art needs not standards but stimuli, not authoritative systems but exceptional teachers—teachers who can do as well as say.

We can teach a standardized alphabet of twenty-six letters; we can teach a standardized spelling, a standardized grammar, and a standardized rhetoric; but all the teachers in the world, all with standardized university degrees, cannot teach a David to write a Twenty-third Psalm, or a Jesus to tell the story of the Prodigal Son, or a Simon to sing "Christian dost thou see them," or a Shakespeare to write a *Hamlet* or a Lincoln to deliver a Gettysburg address.

If "standards in art" means "standards in the elements of art," —standards in drawing, in coloring, in the arrangements of lines

and spots and hues, in anatomical knowledge, and in a knowledge of the history of art—then that is another matter. Such standards in the elements of art are reasonable. They may be desirable and may give results of great value, especially if such results can include the discovery of the supernormal, the supersensitive to beauty, the superconcentrative and superpersistent in self-activity, in other words the talented children.

Talented children are the Republic's greatest asset, and we should welcome any kind of rake or sieve that will enable us to find them; any kind of tape measure or calliper or thermometer that will *fail* to measure *their* potency! The talented children, not only in art in its narrowest sense, but in music, both vocal and instrumental; in language; in the crafts; in the use of the constructive imagination; in nature study and in science; should be found early and fed full all the time, each according to his several ability. Our best teachers know this and do this highly specialized work so far as prevailing conditions permit.

Standards in the elements of art represent the concensus of opinion of generations of cultivated people. Stated broadly they include:

1. Reverent knowledge of natural facts and phenomena
2. Truthful drawing from the flat and in perspective
3. Pure and harmonious coloring
4. Significant rhythmic measures
5. Balanced attractions resulting in a unified whole adequately embodying the subject
6. Such a combination of all elements that the mood created in the mind of the observer corresponds with that intended by the artist

Such standards all may apprehend. Such standards may be progressively realized from grade to grade. Such standards do not hamper the talented, but define the solid hilltop from which Pegasus may safely leap into the empyrean.

THE POINT OF VIEW OF A CITY SUPERINTENDENT

Carroll R. Reed
Superintendent of Schools, Akron

About the year 1760 Rousseau, the great French educator, said, "All children being natural imitators try to draw. I would have my pupil cultivate this art not exactly for the sake of the art itself but to render the eye true and the hand flexible." This remark is one hundred and sixty-five years old and is just one evidence of the antiquity of drawing as a school subject. Drawing was first taught in American schools in 1860. The schools of Boston added drawing to the course of study at that time. Drawing has been a school subject in the schools of the United States for sixty-five years yet it is still considered a frill by the hard-headed business man and is carefully nourished like an unfortunate, weak child by the school superintendent.

The first and most vital interest which the superintendent of schools has in drawing is to keep it in the curriculum in periods of financial stress and to defend it against the onslaughts of indignant and overburdened taxpayers who feel the patriotic call to buckle on their armor and go forth upon a crusade to reduce taxes and to gain political prominence for themselves by marching to battle behind the standard of economy.

Art was first admitted to the public-school curriculum sixty-five years ago as a result of the efforts of the manufacturers of Massachusetts. They petitioned the State Legislature to place drawing in the public schools to raise the quality of manufactured products, and at the same time to develop in the public an appreciation of better manufactured products.

The best argument for the inclusion of art as a public-school subject lies in the moral realm. The sense of the beautiful is the finest pleasure that the human mind can enjoy; it calls into play all the powers of the mind working in harmony. A beautiful object or a beautiful picture is harmonious and perfect, and in learning to enjoy it one identifies himself with it. Reverence for the beautiful is an uplifting, moral force in the life of the individual. Beauty reminds morality that perfection is possible. The holiness

of beauty arouses in us an understanding of the beauty of holiness. Failure to possess an appreciation of art is a moral lack. It is evidence of arrested development, and no person can be wholly educated without an appreciation of beautiful things.

There is another argument however, which is powerful in the defense of art as a part of the public-school course of study. Drawing is one mode of expression. When one learns to draw he has acquired a new language. This language has gone through many stages of development just as has spoken language. The early Egyptians were able to reproduce certain characteristics of the form of objects, but they lacked entirely the ability to represent perspective or the difference in distance of objects. The Chinese and Japanese early developed a form of art which is peculiar in the use of lines entirely rather than masses of color to express the thought. A child who has never learned to draw has been deprived of a means of expression.

The great aim of the public-school course of study in art is to give boys and girls another means of expression, to cultivate a love for beauty, to develop the perception to enable them to see things as they are, and to inspire them to do things in a fine way. The right sort of a course in drawing will do these things to a greater or lesser degree provided it includes the interpretation and appreciation of great pictures and other works of art as well as the training of boys and girls in drawing.

Because art is one of the newer subjects in the curriculum and because it requires special talent to be able to draw, it has been found necessary to have art supervisors. In most school systems the supervisors of special subjects constitute a real problem for the superintendent of schools. The outlines which the art supervisor issues for the guidance of teachers rarely place any emphasis upon the child and the needs of the child. We have been more interested in the art results than in the children. With this aim art teachers do not make the child do enough for himself. An art class should be a class in expression. Children should have an opportunity to express themselves in art, and there should be a great deal of originality and individuality about it. The results should not be the same throughout the class. Art teachers have

difficulty in cooperation in school projects with other teachers on account of the close supervision and the aims and purposes of that supervision.

The elementary schools must lay the foundation in drawing, construction, and appreciation. In the high school art becomes a semi-specialized skill. Art is the starting point of all industry and is a necessary part of everyday life.

Drawing should be alive and should be closely related to the life of the community and to the other subjects in the school program. In the Akron schools during the past year we have been making an especial effort to make our drawing of this type. The following examples show how this has been done.

The making of posters has been a popular means of relating our drawing to the life of the city. Akron celebrates its One Hundredth Anniversary this year so the children have designed posters to be used as Centennial Stamps, the best design is to be chosen by the Centennial Committee, and a prize is offered.

At the fall election the three-mill levy and school-bond issue were before the people. The Art Department did the most effective work of any part of the school system in presenting the facts to the public. The children's posters were used in the street cars, in store windows, and every other place that was available.

At the Community Chest Fund drive a prize was offered for the best design for an outdoor poster. One of our high-school girls won the prize, but the Community Fund was thoroughly advertised through the schools by the making of designs in every school.

Posters are also made for the following purposes: Pure Food Show, Better Homes Week, Clean-Up Week, Book Week, and special posters to advertise the products of Akron. Besides the posters the drawing classes design and make costumes and stage settings for the pageant which is given at the County Fair each year.

The following projects have been carried out in one of the Akron high schools during the past year:

Posters for the Community Fund. One of the posters was selected by the judges and used for campaign advertising.

The Centennial Committee asked the high schools to design a stamp to be used on letters for advertising Akron's Centennial Celebration. These designs were based on historical material obtained from the Civics classes.

During the football season a business man in the neighborhood of the high school asked the Art Department to trim his windows in the high-school colors. This was done by the boys and girls.

Posters were made for the three-mill levy campaign at election time.

A number of "Keep Off the Grass" signs have been made for neighbors of the school.

Posters have been made for plays given by the Senior and Junior Drama Leagues. Posters have been furnished for the operas given by the musical organizations. The scenery for the school opera was designed and painted by the Art Department. This was an Egyptian opera so that it necessitated a thorough study of Egyptian ornamentation and review of Egyptian history.

Posters were made for football and basket-ball games.

A May Festival was held for which the art classes made posters, designed costumes, and worked out the design of the throne of the May Queen. This was made in the manual-training department.

A Christmas pageant was staged with very elaborate costuming and scenery. This was carried out by the Art Department.

The stage at commencement was decorated by the Art Department.

Posters and other advertising signs for the girls' club activities were made.

Advertising signs for Community Night were furnished. Booths for Community Night were designed and trimmed.

Place cards and favors were made by the Art Department for faculty parties and football dinners.

All of the activities represent direct contributions which the Art Department made to the life of the school and to the life of the city.

Art is constantly used to help out in other subjects. Our Latin is made much more vital and interesting by the use of pictures and posters worked out in the art classes. The costume-design classes study historical costumes. The girls who are studying this subject have given illustrated talks in the history class.

An Art League has been organized at the school. Dues are five cents a month. The purposes of the League are to beautify the high school by buying pictures for the walls, foster love for beautiful things, gain a knowledge of beautiful things by having speakers for chapel programs who will talk on art appreciation

and allied topics. This League has one hundred and eighty members at the present time.

The advanced commercial-design pupils are designing book plates. The best design is to be chosen and reproduced, and used for the books in the high-school library.

THE UNIVERSITY POINT OF VIEW

Ralph Fanning
Ohio State University

The point of view of the university has been in serious danger of being mixed with vanishing points and other troublesome points in its attempt to afford a proper perspective view of those brilliant standards of art that presumably flutter on the pinnacle of artistic achievement. Perhaps it is an encouraging feature that the point of view is not yet definitely fixed; that it is subject to frequent changes of focus. While such conditions may tend toward the production of dizziness, or at least a lack of efficient draftsmanship, they promise variety of scenery and an eventual glimpse at the heralded banner or art standard.

The university point of view has been accused of being a bit befogged, because the so-called art departments in many institutions have been feeling their way over no very smooth path toward their recognized places with the liberal arts and sciences. A number of universities have recently established schools of fine arts granting special degrees in this work, but the venture is in early adolescence in our American universities. For some reason the technical study of art does not always seem an easily domesticated member of the academic family, even though the way has been made for many more lowly born and ill-bred infant subjects on the college curriculum.

The historians are always tempted to delve back and trace the reason for the existing state of affairs. It was, the historians tell us, in the early years of the quattrocento that the artist extricated himself from the society in which he lived and sought to realize his own individuality and to cultivate it to the fullest of its many possibilities. The artist made conscious of his high calling, began to take the place of the medieval craftsman.

Schools of art no longer subject to the strict decrees and standards of the medieval craft guilds, but centered around the workshop of some master, grew up in many an Italian town. They became a part of the educational and cultural life of the fifteenth century. The schools became appendages, but never parts, of the flourishing universities of Florence and Bologna and Padua. Thus began the modern relationship of art to centers of organized learning differing greatly from the monastic homes of the artist of preceding centuries. The artistic creator of the Renaissance evidently felt the need of his course of art study running close beside the current of general education and cultural research in every direction. But in obtaining this independence, this individualism which in its day served as one of the greatest items in the Humanistic movement, a certain general standard of art seems to have been mislaid. The glorious revival of the fifteenth century carried the Italian artist along in a splendid career for nearly a century longer, but after the summit was reached, the decline or decadence came rapidly, and one wonders if that very individualism might not have been one of the causes of the decline. Perhaps if the Renaissance could only have carried with it some of the craft standards that were so rigidly required of the craftsman apprentice of the Medieval Ages or even some of the monastic tutelage, benighted as it was, modern art might have had a far greater and richer inheritance today.

Our present problem in art instruction is neither a Renaissance nor a Medieval problem, but the comparison is often tempting for those who disregard Shaw's remark that no one ever learns anything from history except that no one ever learns anything from history—as teachers we have probably all taken exception to other remarks by the witty Irishman. But again as we read history we may discover that the case of the arts not easily finding a place in the academic world is by no means a new problem—Michelangelo's father was in despair because his young son would not study for a scholar but would be a stone cutter, a mere artist; Bologna and Padua placed their painters on the lists of craftsmen nor accorded them rank with their Latin teachers.

The great question then today seems to be the controversy as

to whether the study of art is a cultural study or a technical study, a craft, shall I say? The universities' vision has to be directed along these two points of view, and occasionally, I fear, they point in opposite directions. Both points of view indicate paths that may, after certain meandering, lead to the summits of the desired standards of art, but if the two paths could be more closely charted, even made into one route, an optimist might suggest, would not the fogs be lifted and the route more safely travelled? To do this the university must have the help of the preparatory schools working in a unity of purpose. The university can only begin where the high school leaves off. In drawing, and in art history, and appreciation, we have the technical; in history and critical art analysis the so-called cultural.

First, the university viewpoint would require that these two branches of art instruction be given places of equal importance on the preparatory-school curriculum and that both be treated with a dignity and seriousness worthy of the great name of art. That drawing be taught as a mathematical, scientific subject, a subject for deep mental training, not a trick that is done by the part of the arm below the elbow; that design be not merely advanced kindergarten exercises with prospects of hand-made Christmas presents; and that neither be encouraged for the primary purpose of county-fair exhibitions; that art history take the place of much of the military twaddle that has in the past formed so much a part of our elementary American history so as to insure one-hundred percent Americans. This means an invasion into foreign fields for the art teacher, but the teachers of geography, of geology, of economics, of language, and of literature are all too often fit subjects for art missionary work.

Second, the university viewpoint would make it highly desirable that students entering the Department of Fine Arts should pass a special examination proving them capable of carrying on what would be considered collegiate-grade work. This would necessitate greater attention being paid to course outlines for elementary schools, more uniform and more thoroughly supervised elementary instruction; the production of textbooks, specially in the historical and appreciative fields, that would lead up to and be a part

of the university course. Take the item of a common vocabulary of art terms to illustrate the further need of unification for an educational standpoint. Did you ever stop to compare the different meanings that are given to such terms as value, rhythm, hue, and numerous other terms of the trade that are so glibly used,—the term of art itself seems to cover a multitude of meanings. Of course, artists, you may say, are not dependent upon words. They have other means of expression. But I am not certain but that an understanding of words which are after all the most common expression of ideas or lack of the same—would help to clarify the artist's aims.

This entrance requirement would provide that the preparatory school familiarize the embryo art student with the subject-matter of simple mythology, the lives of the Christian saints, so that at least subject-matter will aid in the appreciation of art, even though this may today be considered the lowest road of approach.

Third, in the coordination between the so-called cultural and professional art subjects, the differences should disappear, the two paths merge into one. History and appreciation of art become a hundred times more vital and real to one who has tried to tackle the task of creating beauty in line or form or color, just as the appreciative auditor of a concert is one who has tried to play the instrument on which the music is being preformed. The most enthusiastic sportsman is the one who has played the game. On the other hand, the technical problem can reach a higher stage of artistic accomplishment, if the artist builds and profits by the art of the past and the knowledge gained from art history correctly taught, not as providing models or styles for slavish imitation, but by providing the wealth of experience that makes for the wealth of an artistic expression.

Finally, the university point of view would urge that a universality of conception should be given to the subject of art. So often I find students coming with the ingrown idea that art is something hand-painted; pictures are for them the limits of the artist's realm. Can the elementary schools not help in early establishing a broader conception of art as the attainment of beauty, the high standard of our profession?

BIOLOGICAL SCIENCE

B. M. Davis, *Miami University,* Presiding

PRESENT STATUS OF BIOLOGICAL INSTRUCTION IN THE HIGH SCHOOLS OF OHIO

C. B. Ulery

State Department of Education, Columbus

The general status of the teaching of biology in the high schools of Ohio at the present time may be summarized as follows:

First.—Biology is one of the most common of science offerings. There are 1,181 high schools in Ohio and biology is included in the program of studies in nearly all of them; it is usually offered in the tenth year. In many small schools where it is necessary to economize in teaching time and where the enrollments permit, ninth- and tenth-year groups are combined and assigned to general science one year and biology the next.

Second.—The general classroom instruction in biology is good as compared with that in other subjects. Teachers of biology usually have the general program of the recitation prepared in advance—they know what to do when the class assembles and proceeds according to plan. Pupils are usually extremely interested in the subject. Field trips, laboratory work, and the peculiar type of subject-matter contribute to pupil interest. No data are available from which to determine the number of failures in biology classes as compared with the number of failures in other subjects, but it is probable that the percent is very low.

When weaknesses of instruction in biology are found they may often be attributed to the causes which are usually given for poor instruction or to the fact that teachers of biology are sometimes over-trained or under-trained. There are a few teachers, particularly in some of the larger high schools, whose knowledge of biology and related subjects is so great that their teaching does not function properly with the average high-school group. The smaller school often finds it necessary to employ under-trained

teachers for biology work. Most applicants for teaching positions today list biology among their possibilities, because most of them have come to feel that anyone can teach that subject.

Third.—Better work could be secured if more laboratory teaching were employed. There is no subject in the high-school course which lends itself more readily to continuous laboratory instruction. It is impossible to draw any clear distinction between laboratory and recitation if proper objectives are to be attained. More field work should be arranged.

Fourth.—The provision of suitable quarters for the teaching of biology and the provision of adequate apparatus are matters that need attention. The provision for biology is meager as compared with the provision for other sciences. In many small schools the rooms provided for laboratory purposes are very inadequate. Boards of education maintaining small high schools cannot, of course, be expected to provide special rooms for the teaching of biology which would be in use only one or two periods a day. Laboratories, however, should be more carefully planned and arranged so that they more properly care for the teaching of all sciences. Many small laboratories at the present time are serviceable only for the teaching of physics or chemistry and are vacant several periods of the day.

Shortage of equipment applies to large schools as well as small. In some schools little is found except a compound misroscope, a few tripod magnifiers, and a dissecting set or two. The need of teaching and laboratory specimens should also be emphasized. The small school often excels the large school in this regard as more field work is done by the small school. In short, more provision should be made in the way of quarters, apparatus, and specimens if biology is to be placed on a par with the other sciences.

REORGANIZATION OF THE BIOLOGY COURSE TO MEET THE NEEDS OF DEMOCRACY

ELLIOTT R. DOWNING
University of Chicago

The recent figures given by the Commissioner of Education in regard to the enrollment in the biological sciences in the high schools of the United States are somewhat startling. In the twelve-year period, from 1910 to 1922, the percent of high-school students enrolled in botany has declined from 16.34 percent to 3.82 percent, in zoology from 8.02 percent to 1.53 percent, a drop of about 80 percent. The enrollment in biology was not recorded until 1915 at which time it was 6.19 percent, in 1922 it was 8.38 percent, a gain of 35.6 percent in seven years. In the twelve-year period referred to, agriculture made a gain of less than 10 percent. Apparently the biological sciences have lost ground when the enrollment is expressed in terms of the total enrollment.

In the actual number enrolled there has been no loss for the high-school enrollment has increased so rapidly that in spite of the decline in percent of the total enrollment, the numerical enrollment in science classes has increased. From 1890 to 1920 the high-school enrollment increased 854 percent, 130 percent in the decade from 1910 to 1920.

The apparent decline is due to the rapid increase in the enrollment in certain subjects such as domestic science and commercial subjects. On the whole, science is holding its own remarkably well. The net loss to science, including domestic science in the twelve-year period, is 4.28 percent of the total enrollment. In the same period history and civics lost 6.60 percent; modern language, 6.80 percent; Latin, 21.53 percent; mathematics, 26.23 percent; and English, 37.60 percent.

During this same period there has been a marked change in the character of the textbooks for use in high schools in the biological sciences. Almost no new zoologies have appeared, comparatively few botanies, but there is a host of new texts in biology.

The most striking difference between the treatment of subject-matter in the biologies and in the old botany and zoology

texts is that in the former a great deal more space is devoted to the principles of the science. When an author plans a course in botany or zoology he is prone to think in terms of the materials to be studied, but when he is planning a course in biology he is much more inclined to think in terms of the principles to be presented. From a quarter to a half of the space in the biologies that have appeared within the last ten years is devoted to important principles, while in recent botanies and zoologies the presentation of principles is exceedingly rare. The great bulk of such books, as a rule more than 95 percent, is occupied with a statement of a mass of detailed fact.

Whether there is any correlation between the decline in the percentile enrollment in botany and zoology and this presentation of a mass of unorganized facts in the textbooks, it is impossible to determine. Certainly, however, the new organization in terms of general principles which is coming into vogue in the biology texts is a reaction which may make the subject much more attractive.

Pedagogically it seems a move in the right direction. In these days of crowded curricula a subject can only justify its place in the course of study by presenting material that is really worth while in life situations. When we come to a perplexity the solution of which demands the application of what we have learned the process is always a deductive process; we ransack our minds for a general principle that will apply in the specific difficulty. It is only, then, as we organize our knowledge in terms of general principles that it comes to have widest application in life.

Therefore, we must select for the subject-matter of our biology course those principles that are of largest significance in social situations. At present we have little or no fact knowledge upon which to solve this problem of selection. Caldwell and Findley have made one study that is a contribution to this problem. They selected seventeen newspapers distributed widely over the country, read a month's issues carefully, then clipped and classified all the articles dealing with biological materials. The ability to read intelligently what is appearing in the papers is one criterion for judging the proper content for a biological course. Similar

studies are going on, using as a basis for the study some of the magazines such as the *Literary Digest.* We need surveys of various social groups—doctors, housewives, farmers, and so on—to determine what biological principles are most frequently needed by them in their daily activities. In time such studies will afford us an actual fact basis for determining what biological principles are of largest social value. At present we must rely largely upon the wisdom of the textbook writer, supplemented by the teacher's appreciation of the local needs in the community which he is serving.

The results derived by giving standardized tests to high-school pupils show that a disappointingly small percent of the students have grasped fundamental concepts. The subject-matter of these tests is usually taken from the materials common to the most widely used texts. It represents, therefore, the subject-matter, which in the opinion of most authors, is of most importance. Powers finds in chemistry that the average student scores only a little over 50 percent on his chemistry test. The author's Range of Information Test, covering science in general, is made up of words and phrases to define or explain; students must be familiar with important concepts in science to do this. More than twenty high-school science teachers to whom it was submitted, when first formulated, thought the average high-school Senior would score close to 100 percent on it. The median score for Seniors, based on over a thousand returns, is a little over 30 percent. Studies based on a new test undergoing standardization show that 60 percent of the high-school Seniors in typical Chicago high schools think that all plants bear seeds; 70 percent do not know that both plants and animals produce eggs; 85 percent do not know that photosynthesis goes on only in green plants; 90 percent are unfamiliar with the simple workings of Mendel's Law.

We are apparently trying to teach too much in our sciences. We should settle on a few principles of real value to the pupil in life situations and hammer these home until they are unforgetable. We must drill pupils on carrying these over into their practical application; for knowledge does not of itself carry over, it remains subject-matter to be used in school and has no connection

with life unless the teacher sees to it that the pupil is habituated to its use in life situations.

The biology course should be broken up into a few units, nine or ten for a year's work. Each of these should eventuate in the comprehension and application of one or more principles of prime importance to the student.

Each unit should have a challenging title or striking introduction so as to interest the pupil from the outset. Each should deal with a problem that is vital to the students. Such unit topics as "Why we eat sunshine," "How a breeder produces a record-breaking milch cow or race horse," are samples of the right kind of units. The former would eventuate in the comprehension of the law of the conservation of energy and its application to the human machine, including the wise choice of foods. The latter would give a knowledge of the laws of heredity and their application to human improvement.

The acquisition of knowledge is, however, only one of the important aims in our science teaching. As Dewey points out, science is quite as much a method as it is a mass of knowledge. One of the most important aims, if not the most important, is to teach pupils to think. It is a trite, though true saying that high schools and colleges are training the future leaders of democracy. The individual and the nation are bound to be successful in proportion as they can think through the problems that confront them.

Science is peculiarly adapted to give training in this thought process. The student can be faced with many problems, small or great according to his capacity, each one of which requires in its solution the complete series of psychological processes that go into reflective thinking. He must use his own senses. He must analyze and synthesize his sense impressions to obtain the clear-cut percepts. He must discriminate by noting resemblances and differences. He must bring into correlation with present facts past experiences. He must formulate his own guess as to the solution of the difficulty. He must experiment to prove or disprove his hypothesis. On the basis of all the material which he has accumulated, he must reason to his own conclusions. It is not

as easy in most other subjects for the pupils to think through a problematic situation from the bottom up. He cannot for instance collect his own facts in history. He rarely has, in literature, that wealth of past experience comparable to what he possesses in science because of his numerous nature contacts. If we are going to train the pupil in the art of scientific thinking, some of the units or at least parts of units must be thrown into the problem or project form. I use the term project in the sense of a problem in the concrete, a problem whose answer is to be given in terms of an objective result.

Let the biology class undertake to free the local community of mosquitos or flies, to bring into bearing again a defunct orchard, to beautify the community by propogating and distributing with directions for planting ornamental shrubs and trees, or any such project, and the pupils are forced to face a real problem on which they can readily score themselves in terms of visible results.

Education is complete only when it results in action. We have grown so accustomed to regarding the school child as an empty vessel, the teacher as a receptacle of knowledge whose business it is to pour that knowledge into the child, that it is difficult for the science teacher to refrain from monopolizing the class time by instruction. The child should be permitted to learn through his own activity. The business of the instructor is to coach the pupil in his endeavor to acquire knowledge, to supervise his activities with a view to perfecting his technique of learning. Let the teacher then start the pupils on a project or problem, then merely stand on the sidelines to see that their thinking follows through in accordance with the rules of the game.

There is a third large value to be achieved in the teaching of biology, namely, to give pupils some appreciation of the values of science and of the self-sacrificing efforts of the great scientists. Some units or at least parts of several units should be so organized as to introduce historical and biographical material. To have pupils realize that science has grown because of the endeavors of many men, to have them appreciate the persistent toil of Pasteur, even after he was crippled with paralysis; of Darwin, in spite of his invalidism; of Priestley ostracized in his community, because

his achievements ran counter to community beliefs is to force them to realize at what cost our present scientific knowledge has been achieved. It is eminently worth while to have high-school pupils in the period of formative ideals learn of the struggles of some of these great discoverers, to help them see that the large values in life are not measured in terms of what one gets out of life, but rather in terms of what one puts into life.

Recent studies seem to indicate that our methods in the teaching of biology need large modification. Within the past few years careful studies have been made of the relative merits of the lecture demonstration and the laboratory method of procedure. These have all shown quite contrary to expectations, that as far as imparting knowledge is concerned the lecture demonstration is superior to the laboratory method. It is true that on delayed tests the laboratory method seems to make a somewhat better showing, but the things that are retained by the laboratory method are the methods of performing the experiment, and what happens in the experiment; while on the items of most importance, namely what the experiment is for, and what it shows, the lecture demonstration methods gives as good or better results than the laboratory method. Even in the development of ability to attack new problems and in the acquisition of laboratory technique, at least in its earlier stages, the lecture demonstration is apparently superior.

This means that we should substitute prepared directions for those done by the students and that we should use the projection microscope rather than the individual compound microscope. Such detailed studies of structure as were formally conducted in the biological laboratory are largely disappearing at the high-school level, but in so far as they are still needed the demonstration method is without much question superior.

In place of the old structural studies, those dealing with the activities of animals, their habits and life histories are recognized now as much more worth while. Studies of children's interests show that the school child is primarily concerned with the identification of animals and plants and with their behavior; they are only interested in structure as it is necessary to the understanding of

animal activities. Furthermore, the studies of children's interests have shown that the chief groups of animals which evoke their attention are in the order of their importance, birds, insects, and the common mammals, or children's pets. The corresponding plant groups are the wild flowering plants, the trees, and the vegetables, fruits, and flowers of the garden. The subject-matter of biology should deal therefore pretty largely with the activities of these several groups.

CITY SUPERINTENDENTS

CHARLES S. MEEK, *Superintendent of Schools, Toledo,* Presiding

THE RELATIVE ADVANTAGES OF DIFFERENT STANDARDIZED TESTS

JOHN R. PATTERSON
Superintendent of Schools, Athens

It requires only a hasty consideration of the topic assigned me to make plain the lack of agreement between the size of the undertaking and the time assigned. Accordingly I am taking the privilege of changing the topic by inserting the words, "The Need for Determining," before the topic as it appears on the program. The topic that I shall discuss in the next few minutes is "The Need for Determining the Relative Advantages of Different Kinds of Standardized Tests."

Those who have been interested in the measurement movement for ten years or more know that it has gone through a rather stormy period. The movement now, however, is old enough to permit a calm and unimpassioned evaluation. The movement has passed out of the field of controversy. It no longer has its bitter antagonists and its extravagant advocates. The fact that the movement has gathered about itself an atmosphere of quiet must not be interpreted to mean that it has joined the shades of the dead fads of education.

Now that the wildness and bitterness and extravagance have cleared away from the testing movement, we are emotionally ready for a different attitude toward the movement. My amended topic is rather expressive of the general attitude of school people toward standardized tests now.

Obviously a test measures what it measures. The name of the test is not a sufficient index for defining just what a particular test may measure. For example, a half-minute test in any specified skill in the fundamental operations in arithmetic must on account of the absurd shortness of time, fail to yield a satisfactory

measure of the pupil's ability in that particular skill. The result in such a test would more nearly measure the pupil's facility in writing numbers, or his ability to pass quickly from one type of effort to another, or to maintain composure under stress. My own conviction, which rests on a dozen years' experience in administering tests to school children, is that the time element has been a venture along a hazardous line. I note with considerable satisfaction that the more recently derived tests and scales do not go to seed on the time element. Anyhow, the point I wish to make is this, we cannot arrive at the relative advantage of different kinds of standardized tests until we have first had a critical determination of just what skill or achievement is measured by any particular test or scale.

It is evident that the proper agencies to attack the problem of determining just what any particular test measures are such agencies as bureaus of educational research like our own, here at the State University, graduate schools in education, research departments in state departments of education, and the like. The procedure to be followed in such an investigation would follow a plan something like this:

1. Critical consideration of the author's major hypothesis.
2. Critical consideration of the author's procedure in the selection and evaluation of the materials of the tests.
3. Critical consideration of the mechanics of the test.

In conclusion may I venture to say that we are at the beginning of a period in which the major use of tests and scales in education will be in relation to the classroom teaching situation. In the period up to this time the major use of these tools has been in the field of achievement surveys conducted by the supervisory staff, or in many cases, by outside persons. Both types of use are worth while, and are incorporated in the programs of progressive school systems. Future courses of study, in any subject like reading, or spelling, or writing, or composition, will acquaint the teacher with the tests and scales that have been derived in these fields, will define the technique for using them, and will set forth standards of pupil performance. Accordingly

I believe, therefore, that when we have clearly defined just what is actually measured by any test, such a test will reach its largest usefulness when in the hands of the teacher in direct diagnostic relationship to the learners' efforts.

ANNUAL VERSUS SEMIANNUAL PROMOTION

R. C. Maston
Superintendent of Schools, Elyria

The experience of every superintendent sooner or later brings his thinking into direct conflict with certain prevailing ideas about promotion. While a great many other elements enter into our conclusions regarding the efficiency of a school system, yet promotion results in all probability can be taken as the best criteria in rendering this judgment. Promotion efficiency varies from as low as fifty percent in some classes to one hundred percent in others. Our ideas also vary as to what constitutes a satisfactory record. We should always strive for such adjustments as may result in an approximation of a hundred-percent record. Any promotion machinery which gets in the way of child advancement should be repaired at once. A low promotion record is explained in most cases by the fact that the system does not properly adjust itself to prevent any such occurrences.

This discussion is not concerned with the How of Promotion, so much as it is with the When, and How Often. It is concerned primarily with the How Often. At this point we will direct our thoughts to the two commonly recognized systems of promotion—the annual and the semiannual—in an effort to point out the merits or demerits of these promotion schemes. I pause here to remind you that the ideal promotion scheme would seem to be based upon the idea that promotion should come whenever it seems justifiable, whether it be once, twice, three, or four times a year, and whether it comes at the end of definitely stated periods or in the interim between these periods. A semiannual or quarterly plan of promotion has in mind not the bulk of the students who are served by the school system but only the few—the five or ten percent who are so unusual or unfortunate as to deserve

special attention in this connection. We all agree that the plan in any school system must include definitely stated promotion periods and our present thought does not take us beyond the annual and the semiannual idea of promotion as they are understood today, although St. Louis pioneered a quarterly plan of promotion as early as 1875 with a view to increasing the advantage which the semiannual plan already had over the annual plan. This, however, was in a day long before the introduction of many other schemes designed to increase promotion efficiency. We could probably safely admit an advantage of the semiannual promotion plan over the annual plan in days gone by, when less thought was given to adjustments to prevent failure, when little attention was paid to the creation of a grading consciousness from systematic distribution of teacher marks, and when rigid standards operated without much regard for the final results of failing upon a student. We must realize that this is a new day in educational thought, and many things have happened which tend to wipe out the margin of advantage held by the semiannual plan.

So far as my knowledge of available material on this subject is concerned, this discussion cannot be backed by any statistical evidence proving or disproving either plan. There seems to be no such evidence available to support either idea, although common practice today favors the semiannual plan, at least in the cities. I present to you only my own thought, gleaned out of my own experience, which has had to do with both plans.

The semiannual promotion plan is more modern than the annual plan; supposedly a development from and improvement over the annual promotion plan with the idea of gaining certain specific advantages which are not possible with the annual plan. It is designed to eliminate to some extent wasting of both the student's time and the school's time in case of failure and to reduce the discouraging effect upon the pupil. It is similarly designed to permit the bright pupil to go forward more easily by skipping a half-year instead of a year.

The first and most fundamental point presented in support of the semiannual plan is the economy of the failing student's time

through reducing repetitions to a half year instead of a year, with consequent lessening of discouragement. Along with this argument is a closely connected idea that a student adjustment is more easily made for the student who is entering the system and that there is less loss for the student who is so unfortunate as to be ill for part of the session. This last point is granted.

The second point used in argument for semiannual promotion is based upon the contention that it is easier to provide for the acceleration of the superior student and that the provision is made with greater safety from the fact that the scope of the work missed under such a plan is only half the amount of work which it is necessary to skip under the plan of annual promotion. Because of this shortened span of omitted work the student can be better adjusted to a more rapid advancement than the usual student progress.

The third point, of minor importance, which might be mentioned to support the semiannual plan is based upon the contention that a great number of students who would ordinarily be held for entrance until the following September are permitted to enter at the beginning of the second semester, completing their grade- and high-school work one-half year earlier than is possible under the annual plan of promotion.

Besides the points that have been mentioned, we find nothing of any considerable importance which can be claimed for a semiannual promotion system. If, however, it can be shown that the semiannual plan is superior in a majority of these points, with the student personnel being taught as effectively under one condition as under another, then we must decide that the semiannual plan is superior. In fact, if it can be conclusively shown that the additional results obtained, even though they are obtained at a greater cost, are of sufficient importance, we must render our decisions in favor of the semiannual plan.

Now let us consider briefly the annual plan in the light of these main points of supposed advantage which have been stated for the semiannual plan, making our references in the order stated.

The question which we shall answer in our own minds is

whether these same advantages can be equaled or even approximated through the annual plan of promotion. In an attempt to measure the results of the yearly-promotion plan in the light of the first advantages claimed for the semiannual plan, I would remind you that at the present time in several schools in the State of Ohio, of which list Hamilton is probably the most important city, the experiment of probational promotion is being worked out. The almost uniform result is that seventy to seventy-five percent of students, who have made a failing record, are making good when given an opportunity to show their ability to do the advanced work over a probational period of somewhere near six weeks on the average. If we assume that ten percent of our students fail under the ordinary conditions and that a properly executed probation plan of promotion used in an annual-promotion scheme eliminates approximately three-fourths of the ordinary percent of failure, we may argue that the annual plan with a probational-promotion scheme eliminates the necessity of repetition of work except for a meager three or four percent who fail to respond to the idea of another chance. These pupils, according to my experience, constitute the unusual type whose best interests deserve a treatment different from that which is found in the ordinary room of average school children. With the possibility of a ninety-seven percent efficient promotion program and with the knowledge that the extra three percent who are failing under the conditions stated above are either misfits or subnormals, who should be provided for through special rooms adapted to their needs and interests, we must conclude that an annual-promotion plan, properly handled, surpasses the results of the semiannual plan in this respect. Moreover, since the teacher in the semiannual-promotion plan is more inclined to apply the promotion standard very strictly when there is one-half year's work to be repeated than in case of one year's work to be repeated, we must feel that there is considerable possibility of increasing the percent of failure in the semiannual plan, which would tend to increase the advantage of the annual plan under the above stated conditions.

Considering annual promotion in the light of the second point

in which semiannual promotion claims an advantage for the student who is capable of skipping, I need only state that with a carefully executed plan for the discovery of the superior mind, skipping has proved to be of no particular difficulty in the annual scheme of promotion where the proper precautions have been exercised. Double promotion or skipping a grade is not a difficult thing in an annual promotion scheme when teachers' recommendations for such procedure have been checked by a good group-intelligence test. In most cases the skipping student soon comes to his expected position of leadership in the group to which he is promoted.

In regard to the third point which has to do with the entering of a student one-half year earlier in some instances than is possible in the annual plan, suffice it to say, that the idea of entering school at midwinter seems to be somewhat unpopular with the average parent. We seem to have approximately one-half as many entering at midwinter under the semiannual-promotion plan as enter at the beginning of the school year.

In discussing the annual promotion in the light of the fourth point, which deals with the number of teachers required to care for a given school system, we have already stated that it is a pretty generally accepted fact that more teachers are required in the semiannual plan than in the annual. This fact is especially true in the high school or in any promotion-by-subject scheme.

My whole thought, up to this point, has been to show that the semiannual plan need have no distinct advantage over the annual plan of promotion. When we stop to consider that seventy-five percent of the argument for the semiannual-promotion plan is found in the statement that it eliminates the necessity for the failing student's repeating the entire year's work instead of the one-half year, which is true in the semiannual plan, it appears that the entire promotion scheme is manipulated to serve the interest of the five or ten percent of students who constitute the failing and the unfortunate element of the school system. When we consider the previously stated fact, that the probational-promotion scheme will reduce your ultimate failures to the three or four percent who cannot be very successfully handled in ordinary grade

work, it looks as if the sacrifice is entirely too great, in case any other serious disadvantages are found in the semiannual plan.

In addition to all that has been said, I desire to call your attention to the fact that teaching efficiency is very seriously affected when we consider that approximately seventy-five percent of the teachers in the ordinary city system, where semiannual promotion is used, are compelled to teach two distinct grades of work. The annual-promotion plan makes it possible to set up seventy-five percent of your program with straight grades for each teacher. You may say that even in the annual-promotion plan we usually require two sections to the room, but the preparation of the teacher for the work of the day is considerably reduced from the fact that the preparation for her lower group is only a slight modification in the extent of the assignment rather than distinct and separate preparations for the double grade involved in the semiannual-promotion plan. Moreover, the modern tendency is to divide students into ability groups. A careful study of the classroom application of this tendency reveals the fact that the semiannual schedule is wholly impractical administratively, because there are not, even in grade buildings of the largest size, enough students to carry out such a scheme without transferring students from their home districts. Accordingly, the semiannual plan becomes even less desirable with ability grouping than it is without.

Adding to what has already been stated, the fact that you must start and stop your school machinery twice every year with the consequent readjustment and regrouping of students, placing them in different rooms under the direction of different teachers, the argument becomes all the more conclusive on the side of the annual-promotion scheme. The semiannual-promotion plan involves the readjustment of all departmental programs and upper-grade work in mid-year, rescheduling of the entire high-school student body, and the complete readjustment of the program. It involves a double burden so far as the transfer of students is concerned, which is a real problem upon every school system. It involves the manipulation of your entire record system, whether it be large or small, to accommodate the changed

conditions at mid-year when the students are placed in an entirely new set-up. When we consider all these facts, with the disturbance which cannot be escaped, with the time element required in making such a change, with the social adjustment of students to new teachers and teachers to new students, it is no wonder that we stop long enough to ask ourselves whether or not the extra attention required really pays dividends at all justifiable in the light of the investment.

While my own arguments might not justify the conclusion that the annual-promotion plan has a decided advantage over the semiannual yet I feel justified in admonishing the school superintendent who is willing to think carefully upon the relative merits of the two systems to stand aside long enough to take a complete inventory of the relative merits of the two plans in question. If I am to state my own conclusion in this matter, considering it from the standpoints of economy, teaching efficiency, adaptability to the modern thought in education (with special reference to probational promotion), simplification of promotion machinery, the element of human adjustment and promotion efficiency, I do not hesitate to say that the bulk of the arguments rests upon the side of an annual-promotion policy.

DEMAND FOR TRAINED TEACHERS

B. R. Buckingham
Ohio State University

I think the title of my talk as it appears on your program must have been inserted by the printer's devil. In this modern day who would be so ill-advised as to talk before a group such as this on the topic Teacher Training? One would not even venture to write a book on a subject so all-inclusive.

Accordingly, I have elected to say something to you about the extent to which trained teachers are needed to recruit the public schools of the state. I have chosen to do this for two reasons: first, because I have something to say, and second, because I think you ought to hear it.

Most of you know that we have been engaged in a project for

more than a year in which we have sought to find out the extent of the supply in relation to the demand for trained teachers in this state. A little more than a year ago I sent out the first requests for the necessary information. I had the backing of a sum of money from the Commonwealth Fund which I had judged to be sufficient for carrying the project forward to a conclusion. I thought I knew the pitfalls and difficulties because I had already surmounted them in another state. I was astonished to learn as the weeks and months dragged on that my previous experience gave no guidance in this case. After bringing the matter before the teacher-training institutions on the one hand and the public schools, on the other, and after putting forth every conceivable effort for more than a year, I found that we were still considerably short of complete returns, and that we had used all our appropriation. We then obtained more money; and at present reasonably complete reports have been tabulated on a part of the study.

Accordingly, I shall consider this afternoon only a part of the original question. I shall confine myself to the question of demand to the neglect of the question of supply.

Before beginning this inquiry I obtained according to the best rules laid down for an approach to a research topic the judgments of competent people concerning different phases of the problem. In various quarters I raised this question: How many new teachers does Ohio require each year? The opinion of the one person who was presumably best informed on this subject was that the state needed about three thousand teachers annually. Other opinions varied but little from this figure. I could not for my own part see how this could be true. If there were thirty-five thousand teachers in the state and only three thousand were taken on each year this could only mean that the average length of service per teacher would be in the neighborhood of twelve years. Now all the studies that have been made of the length of teaching service tend to show that it is much less than twelve years—more nearly five or possibly six years, varying toward the higher figure according as the teaching population was more strictly urban in character.

Part of the difficulty is one of definition. The question, How many new teachers are needed? is intimately related to the question, Who are new teachers? For the purpose of this study a teacher is new to the state if he is appointed either to a new position or to fill a vacancy without having had continuous experience in the state prior to the appointment. In the first place, therefore, a teacher who merely substitutes for another, namely, does not fill a new position or a vacancy as a permanent appointee, is not a new teacher. In fact it is held that the position remains unfilled by this substitute teacher. In the second place, in order that a teacher may be regarded as "new," he must have had no previous continuous experience in the state. By the word "continuous" I mean without an interval immediately prior to appointment. This leads to three types of newness on the part of teachers: first and most obviously, the teacher who has had no experience whatever is a new teacher; second, the teacher whose experience prior to appointment has been outside of the state is a new teacher; and third, the teacher who has had experience in the state but has ceased to teach long enough for his successor to be appointed is likewise a new teacher.

When, therefore, we are concerned with the teaching force of the state as a whole we have three types of newness: The inexperienced teachers whom I shall call N_1's; the teachers whose experience has been outside of Ohio whom I shall call N_2's; and the teachers whose Ohio experience has not been consecutive, whom I shall call N_3's.

The cities of the state represented that 1,202 N_1's were appointed during the year. The exempted villages appointed 111, and the country districts, 2,300. This is a total of 3,613 new teachers of the inexperienced type. As to the N_2's, that is, the teachers who were brought in from other states, the cities appointed exactly 600 last year; the exempted villages 41, and the counties 158—a total of 799. Finally, in respect to the N_3's, the cities recalled to the service after an interval of failure to teach 552 persons. The exempted villages added 44 to this number, and the counties, 522. This gives a total of 1,118 new teachers of this type.

Since all three of these types of newness are necessary in the recruiting of the staff of the State's public schools we may properly find the first general answer to our question, How many new teachers does the state need? by combining the totals for each of these types of new teachers. This total is 5,530.

This is, however, a minimum figure. It means that we received the actual names of 5,530 new teachers. It is as if we were to think of the entire state of Ohio as constituting one immense school district. In this school district vacancies in the teaching force are occurring constantly and a certain number of new positions are being created annually to take care of additions to the population and perhaps additional kinds of school service. We have sought to obtain the names of all teachers who were appointed to fill these vacancies or these new positions. We have obtained 5,530 such names. We know that there must be others though probably not a great many. Moreover, we obtained the names of some persons who may have been new teachers but concerning whom we could not obtain sufficient information to make us certain. We have included only those on whom we had specific and corroborative data. It was not sufficient for us to be told by the superintendent that a certain teacher was a new teacher. We must have the information as to the kind of position she filled, whether or not she had ever taught, and if so where and in what kind of service.

Added to the small but indefinite number of unknown new teachers there is also the need for additional teachers which was not met. If in a school district a vacancy was created on January 1, and if the position was filled for the rest of the school year by the Widow Brown, who used to teach, or by the grocer's daughter, who went away to school, the need for a new teacher was not met. The vacancy still existed, being filled by a substitute. Now in the state as a whole there were toward the end of the school year a fairly large number of positions for which no regular teachers had been appointed. Since the superintendents who contributed to this information were told not to count substitute teachers it is clear that the vacancies to which I am referring should properly be added to the number of teachers needed as re-

cruits to the state's teaching force. In other words, either the substitutes or the vacancies should be counted.

I made a real attempt to secure a report from each superintendent on the vacancies of this sort. I had difficulty in making myself understood and I feel sure that the data received were unreliable. My guess, however, is that three or four hundred cases should be added from this source to the obtained total of new teachers required.

Accordingly, I estimate that the number of new teachers needed by the state annually—assuming that the school year 1923-24 was typical—is about six thousand. In the year in question I know of 5,530. I know that a small but significant number should be added to this to represent missing and defective information. Finally, I know that there were a large number of unfilled positions which were carried down to the end of the year and which represent a need for new teachers.

It will be of interest to note that of the new teachers known to have been appointed one-seventh were drawn from outside of the state, where they had already had teaching experience; while one-fifth were old teachers in the state who were taken on after an interval during which they had not been teaching.

We have analyzed the figures which we have received in this teacher-training project so as to answer a variety of questions. These matters will be reported in detail in a forthcoming monograph. Clearly I can consider but few of these questions at this moment and each question will have to be disposed of rather summarily.

As might be supposed, the vast majority of new teachers are appointed to classroom service. In this connection observe that up to this point I have been using the word teacher to cover all kinds of professional educational positions such as supervisor, principal, superintendent, etc. Non-professional positions such as members of boards of education, business managers, janitors, and the like naturally have been left out of consideration. Still using the term teacher in its broad sense, we find that of 5,530 teachers known to have been newly appointed, 93½ percent were appointed to classroom service. Only 334, or the remaining 6½

percent, entered other types of service. Seventy-two of these were supervisors, 30 of them without a day of experience. There were 177 principalships filled by new teachers and 86 of these principals were without a day of experience. Finally, there were 34 superintendents, ten of whom had never officiated in a schoolroom or in an educational position so far as their records indicated. A rather large number of persons were brought back into the service to be superintendents, principals, or supervisors after they had been out of service. There were 94 of these representing about one-third of the positions of this type that were filled by new teachers.

It is rather important to know the type of school to which these new teachers were appointed. Seventy of them were appointed to the kindergarten. Eleven hundred sixty-four were appointed to service in one-room rural schools. The graded elementary schools took nearly one-half of the entire number, 2,572. The junior high schools required 352 of them and the high schools, 1,349. The rest—only amounting to 22 persons—were scattered among other types of schools.

We must be careful not to suppose that because 1,349 of these teachers were appointed to the high school this is all the new teachers the high school needs. Remember that we are talking about teachers new to this big school district which is coterminous with the boundaries of the state. If we are going to talk about the new teachers the high school needs, or the new teachers required for one-room rural schools, or the new teachers needed for any particular kind of service we shall have to add to these strictly new teachers whom we have already discussed a great many more who are new to the type of service in question. I shall come to this matter in another connection.

Meanwhile let us look into the question of the needs of the state—so far as strictly new teachers represent them—for service in the various grades. Among the N_1's, that is, the wholly inexperienced teachers, we received information from 1,402 teachers as to the grades to which they were newly appointed. Six hundred ninety-four of them or practically fifty percent were in the primary grades. Less than two-thirds as many were appointed

to the intermediate grades, and only 51 teachers were appointed to the grammar grades. After making all due allowance it is entirely clear that the vast preponderance of inexperienced teachers are appointed to the primary grades. This is true after every allowance is made for the larger teaching force in those grades. When we come to look into the question of the supply of trained teachers we shall be interested to find out how many of these teachers were specifically trained for primary work—whether in other words there is the same preponderance in preparation for primary teaching that there is in appointing to primary teaching. The tendency to start teachers in the primary or lower intermediate grades and to "promote" them to the grammar grades after they have had satisfactory experience apparently is very marked. According to this method the benefit of experience in service is largely lost.

With respect to teachers appointed to secondary schools—namely, junior high school and high school—we were interested to find out how many subjects they taught. We have records from 878 strictly new teachers who were subject teachers in secondary schools. Nine hundred of these, or less than one-half of them, taught but one subject. Four hundred sixty-seven, or about one-fourth of them, taught two subjects. The remaining one-fourth taught from three to eight different subjects. A subject in this connection is a rather wide field of knowledge. For example, botany was not distinguished from zoology, but both were included under biology. The various commercial subjects were all lumped together under the term commercial. History and civics were grouped together. All home economics was put under one title. This was also true of mathematics, agriculture, and manual training. But, on as broad a basis of classification as this, newly appointed teachers are expected to teach three or more subjects, as was the case with over five hundred of these teachers, it would seem as if the administrators who permitted this have something to explain.

When we talk about new teachers for Columbus, or Cleveland, or Columbiana County, we are obviously taking a narrower point of view than that of the state as a whole. Every teacher new to

the state must of necessity be new to any locality in the state, but hundreds of teachers are appointed to new local positions who are not new to the state. A teacher who moves from Akron to Columbus counts one as a new teacher in Columbus. He does not count one from the point of view of the state.

We ascertained among other things the number of teachers who shifted from one supervisory district to another during the year 1923-24. We found that there were 2,215 of them. Observe that this number is very much smaller than it would be if we took account of movement from one school district in a county to another or from one building in a city to another. Movement within the county district or within the city or exempted village district was not counted as a shift.

If one were asked the question, How many new principals does the state need each year? or, How many new superintendents? we should have to include two types of appointees: First, those who were new to the state and were appointed to these types of service; and second, those who were not new to the state and were shifted from some other type of service to a principalship or a superintendency. Among the strictly new teachers there were 177 principals. To this, however, must be added 202 who were moved to this position and who did not constitute new employees from the state point of view. Thus the proper answer to the question, How many new principals does Ohio require each year? is—assuming that our figues are typical—about 379. Similarly the answer to the question, How many new superintendents does Ohio need? is found by combining the 34 who were new to the state with the 60 who were not new to the state, a total of 94 superintendents thus being indicated. It is evident, however, that a great many of these superintendents are more or less superintendents by courtesy, for 81 of the 94 were reported from county jurisdictions.

The number of high-school teachers required in a state is always a matter of interest. Again the answer to the question is to be obtained by combining two figures. We must have the high-school teachers who are new to the state and we must also have those who moved into high-school teaching from some other

kind of school. I have already indicated that the number of high-school teachers who were new to the state was 1,349. To these must be added 319 who were new to the kind of school but not to the state. This makes a total of 1,668 high-school teachers required during the year. If we add the junior high-school teachers to these we have a grand total of 2,323 secondary teachers required by the state. From one point of view it is desirable to include the junior high-school teachers with the high-school teachers. Both are teachers of subjects and need a training curriculum which is characterized by a concentration in one or two particular lines. It will be of no small interest to find out when we examine the supply side of our question how nearly the college output of teachers trained for secondary work approaches the indicated two thousand three hundred.

We have a vast amount of data regarding the teachers who were new in various ways last year. I have been able to introduce only a few of the more general topics. Moreover, the whole question of equating supply to demand is left out of account. It is precisely as one brings these two ideas of production and consumption together that one really gets at the adequacy of the state's training establishment. All these matters, however, I shall have to defer to a later occasion. Meanwhile I may summarize these data discussed:

1. The question of how many new teachers Ohio needs depends largely upon the definition of newness. On the basis set up in this article 5,530 teachers were known to have been new teachers last year. This figure is demonstrably less than the true figure both by reason of our failure to receive information and because of vacancies which were not filled. It is estimated that the true need of the state approximates six thousand teachers annually.

2. One-seventh of the needed teachers came from other states; one-fifth were old teachers returning to the service.

3. Ninety-three percent were appointed to classroom service. Seventy-two of the remaining appointees were supervisors, thirty of whom had had no experience. There were 177 principals appointed of whom 86 had had no experience. Thirty-four super-

intendents finally received appointment and ten of them had had no experience.

4. Nearly one-half of the appointments were to positions in elementary schools. There were, however, 1,349 appointments to the high school; and if we add the junior high-school appointments the total was 1,700 new positions filled in the secondary schools. To these must be added the transfers from other schools if we wish to answer the question, How many new teachers does the high school need? There were 319 transfers from other service to high-school service making the total number of new teachers needed 1,668. If the junior high school is added the total is 2,323.

5. Information was received from 1,402 teachers without previous experience as to the grades to which they were appointed. About one-half of these took primary grade positions. Less than two-thirds as many were appointed to intermediate grades and only 51 to the seventh and eighth grades. The policy apparently is to appoint inexperienced teachers to the primary grades. Teachers appointed to secondary schools teach subjects rather than grades. Records were received from 1,878 such teachers, of whom one-half taught one subject, one-quarter taught two subjects, and the remaining quarter, three to eight subjects. Nearly five hundred teachers taught three or more subjects.

6. There was a great deal of moving about in the state, 2,215 teachers transferring from one supervisory district (city, exempted village, or county) to another.

7. As to the rank to which the new teachers were appointed, there were 177 principals plus 202 who although old teachers altered their rank, making a total of 379 principals required. Thirty-four new appointees were superintendents and sixty more were transferred to superintendencies from other ranks. This makes a total of 94 new superintendents. It is clear, however, that many of these were in small places, since 81 of the 94 were reported from county jurisdictions.

CLINICAL PSYCHOLOGY

HENRY H. GODDARD, *Ohio State University,* Presiding

EMOTIONAL DISORDERS IN CHILDREN

EDGAR A. DOLL
Ohio State University

The scientific study of school children is one of the most significant advances in public education. The measurment of the intelligence of children has shed a great deal of light on the causes of success and failure, and has stimulated a wide interest in those other phases of mentality which are important in the adjustments of children at school and in the home.

At present, we know but little about the nature of emotional disturbances in children. The significance of emotions as a factor in individual adjustment is amply attested by the experiences of parents and teachers. The study of the intelligence of school children does not explain emotional disorders, but on the contrary emphasizes their supplementary significance in the child's conduct.

There are four principal groups of emotional disturbances which may be studied by direct observation, supplemented by inquiry into their causes. First, are those disturbances which are normal to the developing individual and which reflect the influence of natural growth and development. Second, is a group of disturbances which have a pathological physical basis, such as shock, diseases, toxemia, and accident. Third, are the disturbances arising from social causes, such as unfortunate environment, bad companionship, and imitation. Fourth, are disturbances due to abnormal mental organization as a result of bad habits, unfortunate discipline, inadequate early training, wrong attitudes, and the like.

The majority of emotional disturbances are normal in character and temporary in duration, being incidental to the individual's trial-and-error adjustment to his environment as he progresses from one stage of individual development to another in the process of achieving ultimate social independence. Those aspects of normal disturbances which are essentially physical in

character are recognized as to their importance, but not treated specifically in this presentation.

Perhaps the majority of emotional disorders, both normal and abnormal, have a physical basis. The normal physical basis influences emotional development through physiological disturbances, such as occur at adolescence, for example. The pathological causes are the result of various forms of ill health or physical misfortune which interfere with the normal development of the effective mental life.

Social causes of emotional disorders are particularly significant from the standpoint of the school's responsibility in fostering normal development and avoiding emotional antagonisms. The school's responsibility is greater than formerly in this respect, as it more and more assumes responsibilities which formerly were taken care of at home. Teachers must be careful to avoid arousing emotional disturbances as a result of faulty learning and as a result of an unsympathetic attitude toward the child. Some emotional disorders at school develop on the basis of school work being either too easy or too hard with reference to the child's actual mentality.

Parents have a definite responsibility in preventing emotional disturbances in the home atmosphere by too much concern for the child, by unfortunate disciplinary methods, by placing too much responsibility on the child and by not sufficiently guarding his health.

(The significance of these considerations was elaborated by illustrative case studies from the Ohio State University Psychological Clinic.)

PHYSIOLOGICAL FUNCTIONS AND THE EMOTIONS

Roy G. Hoskins
Ohio State University

Perhaps the most neglected, or most thoroughly mistreated, topic in the whole realm of biology is that assigned as the subject of this address. We who are addicted to educational pursuits seem to have felt it desirable, perhaps as a defense reaction, to

exalt the improvement of the mind and intellectual activity as the basis for sound social conduct. The assumption implicit in a large share of our educational policies is that "as a man thinketh in his brain so is he." The older conception, "as a man thinketh in his heart" was much nearer the truth. Although clear thinking upon the part of the leaders in the various walks of life is essential to satisfactory progress, it is, I think, literally true that to the rank and file sound feeling is vastly more important.

Even in a meeting devoted primarily to a discussion of democracy in education I venture the assertion that leadership and followership are distinct qualities. Both are essential for wholesome social life, but they must be developed by quite different means. True democracy, I think, would supply every citizen the training best calculated to promote his individual happiness. This implies something quite different from detailed equality of treatment. I know of no surer way to promote unhappiness than to attempt to make a leader of an individual who by natural endowments and instincts is a follower. The result is necessarily, in so far as it is effective at all, to leave him dissatisfied with, and unfitted for, the only sort of career in which he could be contented. A happy plumber, to my mind, is a much more edifying spectacle than a thwarted and miserable pseudo-scholar. Whatever may be our Utopian dreams, the fact is that nature has made of most of us conformists and not leaders. The conduct of most of us is determined almost solely by our instinctive trends and the accompanying emotional reactions. I repeat, then, that in any society honestly and intelligently concerned with the greatest good to all its members, the first attention should be directed toward the emotions.

Good habits, upon which a satisfactory emotional life is dependent, should be the first aim in any educational règime. Judged by their results, our present educational policies leave much to be desired. A distressingly large proportion of the more capable students are allowed to acquire habits of frittering and mental shiftlessness with resulting insincerity toward the important issues of life. This makes neither for social welfare nor for individual happiness.

Let me assure you at once that I feel but slight competence to discuss the topic assigned to me—a fact, however, that is not advanced as any invidious claim to distinction. Beginning with the epochal work of William Harvey on the circulation of the blood, the primary aim of physiology throughout its productive period has been to reduce biological phenomena to terms of physics and chemistry. The emotions, or the affect reactions in general, have been strikingly resistent to any such treatment.

My attention was focused on this difficulty by an incident that came to my attention some years ago. A medical practitioner, one of my own students of a few years before, was called to treat a young lady who was suffering from long-continued malnutrition due to inability to keep food in her stomach. Her weight should have been one hundred and forty pounds; it was ninety. The young doctor enthusiastically set out to solve her difficulty. All the usual tests were made and all gave negative results. As a mechanism the young lady seemed faultless. The young doctor brilliantly concluded his connection with the case by calling the mother into the hall and in the hearing of the patient stated that there was absolutely nothing wrong, that the girl was merely a fool.

That a genuinely intelligent young man had been in my classroom for a year and had been capable later of such a glaring blunder led to some serious cogitation. I thought back over the points we had emphasized in connection with the nervous system. We had discussed neurons, reflexes, central localization, and similar topics apparently so successfully as to have convinced the young man that he could deal with his patients as machines. As a matter of fact, for practical purposes the neurology that he got was adapted to the diagnosis of definite nervous lesions and, I fear, very little else.

In the light of this experience I wrote to the author of the textbook we were using—who happens to be a personal friend—and ventured to suggest that in the next edition of his work he include a chapter on psycho-biology that would deal especially with the instincts and the emotions. He replied that such a chapter would doubtless be desirable but that he felt himself

entirely incompetent to write it and furthermore did not know anyone who was competent.

From one point of view one must applaud the efforts of the psychologist to reduce the phenomena with which he deals to the purely objective. Obviously in the long run the more thoroughly we know the mechanism the more intelligently can we deal with the functions. That we shall ever succeed in dealing adequately with the fundamental feelings of mankind, however, on a purely mechanical basis, is perhaps more a wish than a well-founded hope. I am fully convinced that, at any rate for the immediate present, behaviorism does not furnish a satisfactory point of departure for those who have to deal practically with emotional conditions. That I may be in error in this feeling is freely admitted. I must confess that my attempts to fathom the mysteries of this branch of learning have been sadly distracted by admiration of the versatility of its proponents in the exercise of the language habit. I gather, however, that the gist of behaviorism on this point is a theory that the affect reactions are merely a matter of visceral or neuro-muscular physiology, that the affect is merely the assertion of awareness of muscular tension.

Such a theory I have been unable to harmonize with certain observations. Let me illustrate. Some years ago I was a member of a party that was working in the Rocky Mountains. We had occasion to ascend slowly from a certain valley that had been the scene of our labors. Knowing that a long, hard climb was before us, we started about sunrise. After an hour or two the experience reduced itself to a dogged contest with muscular fatigue. Each step was a problem. Our eyes and our thoughts were on the dim, rough trail. Ultimately I happened to glance up and saw the most magnificent sight I have ever beheld. Mt. Hood in its glorious immensity seemed to fill the horizon. I am very sure that the feeling of awe that came over me was practically coincident with the first view. It could not be explained in terms of muscular changes because the neuro-muscular action pattern was firmly set and continued without interruption in the task of progression. It could not be satisfactorily explained as due to changes in the visceral organs. Such changes definitely

require a matter of seconds for their establishment. I am constrained to believe that the emotion was due to some sort of central reaction, and that any visceral perturbations that may have occurred were primarily results and not causes.

The theory can be easily tested in another way. The intramuscular injection of adrenalin into a susceptible subject leads to a remarkable simulation of the picture of emotional distress. The skeletal muscles become taut and often tremulous. The face becomes pale, the respiration deep, and a cold sweat appears on the brow. The heart rate is increased, the blood pressure elevated. In short, the whole picture of a major emotion arises. Within a month I have talked to a professional psychiatrist, a trained observer who has specialized on problems of somatic diagnosis, who is himself an excellent subject for the experiment mentioned. Upon six different occasions he has undergone the experience of reacting vigorously to adrenalin. He states, and I think entirely reliably, that he felt no emotional reaction whatever beyond a vague dissatisfaction with the bodily changes of which he was conscious. If this experiment is correctly reported, as I believe it is, it leaves the James-Lange theory quite untenable. I have had opportunity to check the experiment in two particularly sensitive untrained subjects. Both showed striking objective evidence of emotion; both denied any particular feeling and expressed bewilderment as to why they should be acting so strangely.

It has seemed desirable to discuss this point at some length to establish a background for the remarks to follow. The only position that seems to me practically tenable in the present state of our knowledge is that the affect reactions arise in the good old-fashioned way from disturbances in certain brain cells, located probably in the thalamus. A certain appreciation of the difficulties under which proponents of interactionism have struggled induces no enthusiasm in the adoption of this point of view. When the signboard points north, however, I cannot bring myself to turn southward, no matter how much more attractive the pathway, nor how enticing the view.

Whatever be one's attitude on this point, we can all agree that the major emotions, such as anger, fear, or anxiety, are accom-

panied by marked excitation of the sympathetic nervous system and thus by a wide variety of peripheral effects. The term "sympathetic nervous system" is a misnomer that has been and continues to be a serious source of confusion. The name should have been discarded long ago when the function originally imputed to the structure was disproved. It was assumed that its function is to afford a short circuit for nervous impulses and keep the viscera working in sympathy with one another. Its actual function is quite different. Since the term has remained in use its meaning should be carefully restricted to that assigned to it by Langley. If one wishes to refer to the involuntary activities as a whole the term *autonomic,* not sympathetic, should be employed. The autonomic nervous system was defined by Langley as comprising all, and nothing but, the outgoing fibers to the heart, smooth muscle, and glands. In the proper sense of the term it includes no afferent paths whatever. Work of recent years seems to necessitate the addition of one further group of fibers to the autonomic system, namely those non-medulated nerves that are distributed to the skeletal muscles and that apparently have an important function in the regulation of plastic or postural tonus. This conception, incidentally, supports the position that emotions are not peripherally generated, because the activity of all non-medulated fibers, so far as known, involves a marked latency of response.

The autonomic system gives off fibers at three levels: first, the mid-brain region; second, the middle-cord region, that is from the first thoracic to about the fourth lumbar segment; and third, the sacral region. Curiously enough, the fibers from the head region and from the sacral region have several important characteristics in common. They react alike to such drugs as atropine or pilocarpine. They have functions in general antagonistic to the fibers coming off from the middle-cord region. This first and third group, that is the cranial and the sacral autonomics, Langley treated together as the para-sympathetic division of the autonomic system. The para-sympathetic group arising from the brain region supplies the eye, the lacrimal, and salivary glands, the heart, the bronchial passages, and the alimentary tract as far

down as the descending colon. The sacral outflow meets the cranial at this latter point and innervates the lower part of the digestive tract and the pelvic organs. Since the vagus nerve plays a predominant rôle among the para-sympathetics, the whole group of fibers is sometimes referred to as the extended vagus system. It is also, most confusingly, the "autonomic system" of German writers.

If one does become confused at this point, however, he can easily reorient himself by turning to the sympathetic system in the properly restricted sense of the expression. If he knows what is meant by the term sympathetic, he has merely to reflect that all other autonomic fibers belong to the para-sympathetic group. We accordingly lay special emphasis in our classes on an understanding of the sympathetic system. From centers in the medulla many ordinary medulated axons descend to the efferent neurons scattered up and down the spinal cord, as previously mentioned, from the first thoracic to about the middle-lumbar region or, in everyday terms, from the top of the chest to the small of the back. From these levels neurons pass out at each segment through nerve paths made up of preganglionic fibers going to the sympathetic nerve chain that runs up and down inside the body cavity. Here the fibers make synaptic connections with other neurons through which the second stage of the journey of the impulses is carried out. Some of these secondary neurons return toward the spinal cord to join, and be distributed with, the spinal nerves; others are distributed directly to the viscera; and still others ascend in the neck as the cervical sympathetic nerves, to be distributed to the smooth muscles and glands above the chest.

I have taxed your patience with this technical enumeration because of the fact that no clear comprehension of the peculiar combination of bodily effects of the major emotions can be obtained without knowing the distribution and the functions of the sympathetic fibers. They afford dilators for the pupils of the eyes; inhibitors for the digestive system, including both the associated glands and the musculature; dilators to the bronchioles; augmentors to the heart; fibers to the liver that cause discharge

of sugar; secretory fibers to the adrenal glands; vessel-constricting fibers to the internal organs and the skin; and vessel-dilating fibers to the skeletal muscles. It is theoretically important that the sympathetic system in all probability supplies secretory fibers also to the thyroid gland, though it must be emphasized that this has not been conclusively established. Having in mind what has just been said, and knowing that such emotions as fear and anger are accompanied by marked excitation of the whole sympathetic system, the bodily changes characteristic of these emotions could readily be surmised.

At this point let me allude to the relation of the endocrine organs to emotional conditions. The most significant thing that can be said in this connection, I believe, is that here we are largely in *terra incognita*. The literature is unfortunately profuse and as inconclusive as it is verbose. This latter fact has been grossly slurred over by a considerable number of armchair scientists who harbor the delusion that by verbalistic contortions they can contribute to scientific advancement. I dare say many of you have read and perhaps been fascinated, as I was, by a remarkable little book written two or three years ago by a young chemist, purporting to explain all the mysteries of sociology and psychology in terms of internal secretions. The fascination for me lay chiefly in wonderment how one could make so much that is fantastic seem so plausible. Time does not serve for detailed criticism of this and many similar though less ambitious outpourings. The thesis of the book is that personality is a matter of internal secretions. I would only point out that the guinea pig is even better supplied than is the human being with endocrine equipment. The remarkable depth and variety shown in the personality of this little animal needs no comment.

This much only can be safely said, that prolonged sympathetic activity would probably involve chronic overstimulation of certain endocrine glands, especially the thyroid and the adrenals, and might thus lead to chronic disorders of the viscera. The idea has theoretical charms and is not without supporting evidence, but biological sanity demands that we recognize it as only a more or less plausible theory. It is much less firmly supported, for

instance, than is another biological theory that has recently been legally established by the legislature of Tennessee to be a sacrilegious delusion.

Let us return to a consideration of sympathetic activity as related to the emotions. We can kill two birds with one stone by considering at the same time the Cannon theory of the emergency function of the adrenal glands. Twenty years ago Cannon was engaged in a study of the motor activities of the digestive tract. His method, in brief, was to give to cats a meal containing barium salts and then to study the peristaltic activities by the shadows cast upon an X-ray screen. He frequently had a disconcerting experience. If he chanced to select as experimental animals placid, matronly females they accepted the experiment in good part. They lay quietly on the animal holder and peristalsis proceeded apace. If, however, the experimental animal happened to be a pugnacious, radical young male the case was quite otherwise. He vociferously asserted his right of free speech and manifested his thorough disapproval of modern science in every way in his power. After a time, however, he would became resigned to the inevitable and lie quietly, but peristalsis would not begin for a half hour or more. The emotion had subsided; the effect persisted.

In seeking an explanation Cannon was led to consider these facts. The major emotions are characterized by marked sympathetic activity. The adrenal glands are known to have sympathetic innervation. Stimulation of the sympathetic fibers to these glands is known to result in a discharge of adrenalin. Adrenalin picks out the sympathetic nerve terminals throughout the body and sets them into activity. As previously mentioned, the inhibitory fibers to the intestinal tract belong to the sympathetic group. The theoretical explanation propounded by Cannon and, I suspect, widely misunderstood by psychologists, is that the major emotions, fear and rage, are accompanied by marked sympathetic excitation, leading, among many other things, to augmented adrenal discharge. The adrenalin thus liberated to some extent reinforces the primary sympathetic activity. Cannon has not assumed at any time and has specifically disclaimed the belief

that the adrenal discharge is in any sense primary. Any chemical theory of the emotions assuming to be based on Cannon's work must seek further. Without going into details it may be said that despite more than a decade of intensive study in several laboratories the Cannon theory has been neither proved nor disproved to the satisfaction of various physiologists. The weight of the evidence is distinctly, I think, in its favor; indeed, to my mind the evidence is practically conclusive, but some excellent authorities would dissent from this position.

Whatever part the adrenals may play, the fact is that these major emotions lead to striking and important bodily changes. By enlarging the air passages breathing is facilitated; digestive activities are brought to a standstill; the level of the blood sugar, which is far and away our most important if not our only immediate source of bodily energy, is materially raised. This may go to a point of causing actual overflow of sugar through the kidneys. The spectators at an exciting football game at Harvard some years ago were shown to have undergone such an experience. It is altogether probable that one of the by-effects not considered when our own Stadium was erected is a very considerable waste of sugar per year. In addition to increased fuel supply in the blood its efficiency is also augmented by increased circulation rate. The heart beat is augmented and the general blood pressure is raised. Another important reaction which was studied at some length a few years ago in Hartman's and in our laboratories is a mass shifting of the blood from the abdominal organs and the skin to the skeletal muscles.

In seeking for an explanation of this remarkable coincidence of happenings, one is tempted to teleology. Of what use to the organism could such a series of changes be? The answer seems obvious. The changes are all such as would facilitate violent muscular activity, such as would be helpful, as Cannon suggests, in meeting the emergency which gave rise to the emotion. They would facilitate either combat or rapid shift of environment. Technically phrased, the organism would be integrated for muscular activity. An accentuation of energy output as well as new direction of energy expenditure would be promoted. On the

other hand ,the flood of inhibitory impulses to the digestive tract and the shifting of the blood supply from the viscera would, and as a matter of fact do, quite unfit the subject for the ordinary vegetative activities. Time does not permit a detailed analysis of all the disturbances that might ensue from a continued state of emotional unrest. Presumably the most important is interference with the digestive processes. This may lead to acute indigestion and, if continued, to chronic malnutrition with a long train of subacute bodily disorders.

If the emotions, rage or fear, lead to adrenal discharge, would nociceptive stimulation have a similar effect? Also would partial asphyxia,—the "breathlessness" that would quickly result from the muscular activity of combat or flight—cause adrenal discharge? I had the privilege of collaborating with Cannon in a study of this problem. Without going into technical details it may be said that evidence which seemed to us convincing was obtained that both asphyxia and strong sensory stimulation cause enhanced adrenal activity. In this, as in numerous other respects, the bodily effects of pain and anger or fear are very similar if not identical. One can but wonder why physicians have been so slow in recognizing this fact. Any patient with a pain can secure immediate consideration. If he has only a fear the physician is more likely than not to regard it as quite outside the scope of his professional field.

The phenomena just discussed are results of exciting emotions. Another important group are those that have a general depressant effect. These should also be discussed in this connection, but I know of no evidence on the physiological side sufficient to justify presentation. If one were to fall back on teleology, he might theorize to the effect that these are a fundamental part of the so-called "freezing" defense method of feral life, but such theorizing would seem to be more entertaining than profitable.

In a very considerable proportion of the sufferers who seek medical assistance, the central difficulty is to be sought in the emotional field. It is unfortunate both for the patients and for the prestige of the medical profession that so little systematic account has been taken of the psychological factors in disease.

In a great many instances if the emotional life can be properly stabilized and suitable outlets afforded, if the fears of the patient, groundless or otherwise, can be laid at rest, disorders will be automatically corrected. In brief, pathology will give way to physiology.

A failure to take proper account of this fact has left the field of medical practice wide open to bizzare cults. The history of medicine affords many examples, which would be amusing if they were not more or less tragic, of the long-continued employment of absurd or irrational therapeutic measures. An outstanding example is now before us in the purile tomfoolery pretentiously put forward by Abrams as the "electronic system." Another is a curious theory that the spinal vertebrae frequently become displaced and press upon certain nerves, and thus set up diseases. As a matter of fact it requires about sixteen hundred pounds shearing weight to displace a vertebra, and if one is displaced, months of time in a plaster cast is needed to correct it. The chiropractic hoax and many another have this one thing in common: they reassure the patient and bring about emotional rest and thus allow nature to attend to her own difficulties. In that very numerous class of cases in which no organic defect needs correction such measures may be practically effective. All these advantages can quite as well be obtained, however, without hocus-pocus by any decently educated physician who will intelligently set himself to recognize and deal with the affect disturbances. If the trained physicians would skillfully take over this work it would largely prevent the tragic ineptitude of treating Graves' disease or diphtheria by "spinal adjustments" or cancer by prayer and meditation, while the disorder progresses to the incurable stage.

The foregoing facts have a direct and obvious bearing on the educational program. Every disturbance of bodily well-being and every distraction of attention adds so much to the difficulties of the teacher. Indeed, they can easily render any significant educational progress impossible. The members of this audience undoubtedly know much better than I the amount of delinquency that can fairly be ascribed to avoidable emotional factors. In

the last analysis I think that the difficulties arise largely from hereditary deficiencies. These may be those of the parents, leading to a disordered home life, which is in turn reflected in the disturbed physiology of the child, or they may be defects in the child himself. This fact does not, however, absolve us from any helpful measures that can be taken to aid the unfortunate subject, either by better adapting him to his environment or by better adapting the environment to him.

We are thus brought back to our starting point. The emotions offer the most important problem in biology. Whether the physiologists admit this fact or tacitly deny it, the fact remains that whatever may be the ultimate explanation of the emotions, they play a large rôle in determining the bodily reactions and hence in the welfare and progress of the individual.

THE EMOTIONAL INSTABILITY OF CHILDREN WITH REFERENCE TO THE UNDERLYING TOXIC FACTORS

Henry A. Cotton
New Jersey State Hospital, Trenton

The problem of the abnormal child during the early school years has assumed alarming proportions in the last twenty-five years. In every educational system it has been necessary to make provisions for this rapidly increasing group. Special classes with specially trained teachers have been found to be essential if this group is to have proper education and training. One naturally asks why this great increase in this group during the last few years? It is well within the memory of all of us when such provision was unnecessary. During our early school years I am sure educators were not concerned over this problem. There were stupid boys, lazy ones, and even mischievous ones, but discipline was maintained by means of a ruler, or sometimes a strap, and that seemed to be all that was necessary for that type of delinquent.

Today, however, there is evidence in every community that there is a special group of children which needs this special

training. The discipline that was administered in the last generation is entirely inadequate to meet the situation as it exists today. You, as educators, know that the numbers of these abnormal children are increasing rapidly, that provision must be made for their training. Furthermore, in spite of all advances that have been made in the study of these children, you have many failures. Some of them, it is true, tend to readjust themselves to proper training; others, however, present a different problem and fail to receive any benefit from special instruction.

Not only is this group of abnormal children increasing at an alarming rate, but we, as psychiatrists, see many more children between the ages of twelve and fifteen with definite psychoses. Formerly such cases were rare; today their numbers are steadily increasing. Hardly a week passes that I am not called upon to examine a child who has exhibited abnormal behavior, and frequently to a point of definite psychosis.

It is gratifying to know that this problem is receiving due consideration in most of the states. Much is being done to study, from the psychological standpoint at least, the subnormal child as well as the abnormal one. Not only is this work carried out in special classes, but medical inspection is given in the public schools which is a definite, distinct step forward in the solution of these problems. One has but to study the reports of various cities where adequate attention is being paid to physical deformities of children to realize the enormous amount of good work that is being done. This is especially true of the public schools of Rochester, New York.

Although we can say that a good start has been made, we feel there is a great deal to be done and that many of the defects are overlooked. In spite of the good examinations that are being made, many of these cases fail to receive what we consider an adequate physical examination by means of laboratory and X-ray studies. It is interesting to note that the greatest advances made in the study of this problem of the abnormal child have been made in the juvenile correctional institutions. When a child has become so incorrigible that it is necessary to have him or her committed to a correctional institution then, and only then, are

the proper studies made of both the mental and physical defects. These examinations, we maintain, should be utilized before the child reaches a state which necessitates the confinement in a correctional institution.

We have been especially fortunate in having an opportunity to study this problem in New Jersey. For the last seven years a Psychiatric Clinic for Correctional Institutions has been functioning successfully, and there has been collected a large amount of interesting data which we feel will materially aid the solution of the problem. The knowledge gained in the study of juvenile delinquency will be found to have a direct bearing when applied to the abnormal school child.

This Psychiatric Clinic is composed of psychologists and three members of the staff of the New Jersey State Hospital, Trenton. These psychiatrists are detailed to various correctional institutions, including the Jamesburg Reformatory for Boys, the Rahway Reformatory for Juvenile Delinquents, the State Home for Girls, and the State Prison. Every newly admitted individual receives thorough psychological, psychiatric, and physical examinations. The psychological work was for years under the direction of Dr. Edgar A. Doll, who, with assistants, made the psychological examinations, and had charge of the classification work at the State Prison. Not only are all the new inmates examined thoroughly, but any person in the institutions showing any abnormal conduct is referred to this clinic for examination and recommendation.

Up to the present time we have not had a clearing house for these cases. At the present time they are sent to the State Hospital at Trenton for examination and treatment. As the value of the work increases and its importance is demonstrated, we hope that the state will establish a clearing house, psychopathic clinic, or restoration hospital for the treatment of these individuals.

During this time 274 individuals have been admitted to the State Hospital. Out of that number ninety have, after treatment, been pronounced normal and returned to the various institutions. This includes forty-six cases admitted from Rahway, nineteen

cases recovered; fifty-one cases admitted from the State Home for Girls, twenty-one recovered; 115 admitted from the State Prison, thirty-four pronounced normal after treatment and returned to the Prison. Thirty-two percent of these patients have been returned to the institutions as normal. We will speak of the treatment later.

The cases from Rahway and the State Home for Girls showing abnormal conduct we formerly considered subnormal and defective. They were transferred to the State Home for Feebleminded and as a rule remained there the rest of their lives. Instead of the old procedure, which meant not only that the patient was confined at the expense of the state but was nonproducing as well, we now have 38 percent of that number not an expense to the state and self-supporting as well.

I have gone somewhat into detail regarding the Psychiatric Clinic for Correctional Institutions. At first one might question the relation between this group and the abnormal school child. I do not think it is difficult to demonstrate that there is a very close relation between these groups, that the work that is being carried out in these cases could and should be done in the case of the abnormal child in school. It should not be necessary for the child to come in conflict with the law before proper examinations are made.

The Rôle of Chronic Sepsis and Toxemia

As already stated, a good start has been made in the public-school system. This is especially true in some communities, but I maintain that the examinations as yet are not thorough enough, and many important points are overlooked. It is only within recent years that we have discovered the important rôle of chronic sepsis and toxemia in the causation of many obscure mental and physical disorders. I will not here go into the pioneer work except to mention the work of Dr. Henry S. Upson of Cleveland who, as early as 1908, made many valuable contributions to the subject of infected teeth and mental disorders. The work in the last seven or eight years has gone far beyond the expectations

of Upson. Foci of chronic sepsis, instead of being limited to the teeth, as he thought in those days, are now found in the tonsils, gastro-intestinal tract, genito-urinary system, and other portions of the body. The danger of chronically infected tonsils is now pretty well known. Fortunately for the younger generation, most of the children have had their tonsils removed. I am stating a fact when I say that most of the patients admitted to the State Hospital, and this applies also to the defective delinquent group, have not had their tonsils removed.

In the younger generation, as I have stated, very few children escape the removal of tonsils. The importance of this cannot be overestimated. Dr. Alexander Lambert, of New York, recently published a paper showing the disappearance of chronic rheumatic troubles in young people in Bellevue Hospital since the removal of tonsils in children had tended to become general. I do not hesitate to say that the enucleation of tonsils is going to remove one of the extreme dangers and causes of death in middle life. The rôle of chronically infected tonsils in producing such conditions as chorea, rheumatism, neuritis, heart and kidney lesions, and gastro-intestinal disturbances is now well known. The danger of chronically infected tonsils arises from the fact that most of the people do not realize that their tonsils are infected. At the same time the infected tonsil may be constantly pouring toxemia and infection into the system, causing these many diseases.

The leading dentists today are alive to the importance of ridding their patients of chronic sepsis as found in the teeth. I will not go into detail regarding this subject. The advent of the X-ray has shown the dental profession their manifest errors, and many of them are conscientiously correcting their practices. There is still, however, considerable work to be done to convince the dental profession as a whole that extraction is better than root-canal filling or bridge work, that devitalized teeth should be extracted and not kept for appearance sake and infection covered up with gold caps and porcelain crowns. Surveys of school children have shown that the majority of them have very serious oral infection; not only is infection apparent on inspection, but

X-rays demonstrate it even more than is evident from examination of the mouth alone.

One of the more serious dangers, often overlooked in school children from the age of twelve to fifteen, is impacted third molars or wisdom teeth. When the dentist looks in the child's mouth at this age and sees a number of teeth perfect he passes that child as being free from dental infection. They maintain rightly, of course, that the wisdom teeth are not due to erupt at this time, but an X-ray examination will show that the wisdom teeth are already impacted and will never erupt, and often at this time they are producing serious infections and toxic conditions in the child.

From our experience in the last seven years of cultures of all impacted molars, we are convinced that every one is infected, although the X-ray plate may not show any massive infection of the bone. A great many dentists will disagree with this statement, but it is based on experience and we have many cases which would prove this assertion. I will cite several.

A woman thirty-five years of age had arthritis and stiffness of all the joints. This had been going on for a period of eight weeks, so that she was perfectly helpless. This was in 1921. On one Saturday in September we X-rayed her teeth and found she had four impacted third molars, two upper and two lower. The teeth were extracted, and in twenty-four hours her joint condition cleared up and she has never had any trouble since. The only explanation of this sudden clearing up of the arthritis following extraction of the third molars is that the infection originated from these molars and affected the joints.

If you will allow me to be personal I will cite the case of my own son, thirteen years of age, who showed a marked change in disposition. He was especially bright in school, but physically under par. Two years ago he had to be kept out of school for over three months. X-ray of the teeth showed impacted lower third molars. Finally these were removed and all his symptoms disappeared.

Many similar cases could be cited showing the importance of recognizing in young children the danger of impacted wisdom

teeth. I would emphasize the fact that inspection of the mouth of children is not sufficient to determine dental infection, but that children around the ages of twelve to fifteen should have their teeth X-rayed. The importance of this will be discussed later.

Gastro-intestinal disturbances.—The recognition of the importance of chronic sepsis in the teeth and tonsils, while important, is not the whole story. In many cases, fortunately, this is the only source of trouble and with its removal the difficulties disappear. Probably 50 percent of our patients, however, have serious gastro-intestinal disorders. The stomach can be the seat of secondary foci of infection, the primary source being in the teeth and tonsils. Thus, examination of the stomach contents will show a great reduction or entire absence of the hydrochloric acid content, and the presence of pathological bacteria such as streptococci and various types of colon bacilli. This is not apt to be so prevalent in young people as in adults, but it does occur.

More serious, however, are the abnormalities of the lower intestinal tract, especially the colon or large intestine. Habitual constipation is becoming a prevalent disorder and unfortunately looked upon by most physicians and people as a necessary evil to be combated by enemas and cathartics. Intestinal stasis and toxemia, unfortunately, have not been given the consideration their importance demands. Sir Arbuthnot Lane of London has, for years, been preaching the bad effects of intestinal toxemia, but up to recently has had very little support from the medical profession.

For the last eight years we have been interested in this phase of toxemia. Through the work of Dr. John W. Draper, of New York, we have been able to study this subject thoroughly. We have collected a large amount of interesting data which is available to the medical profession in general through our publications. In a majority of our patients we get a history of chronic constipation from childhood. At first there are no symptoms as a result of this condition, but as the patient becomes older and the constipation becomes more pronounced the stasis and toxemia begin to show their effect on the whole body. Over 50 percent of our

mental cases with pronounced psychoses show disturbance in the colon, and this percent would also apply to the defective and delinquent classes.

Gastro-intestinal X-ray studies, properly carried out, taken in connection with the history of chronic constipation, will successfully determine the presence of stasis in the colon. Physical examination will also indicate the presence of pain and tenderness in the right or left side, but this is not so conclusive as X-ray studies. The origin of such conditions is not altogether clear. In many patients we are probably dealing with a congenital effect, often inherited from the parents.

I have a case now under treatment whose grandmother was habitually constipated and died at the age of fifty-two from intestinal obstruction. The mother was a gastro-intestinal invalid for years and was operated on by Dr. Ochsner, of Chicago, some ten years ago, since which time she has been entirely well. The patient is a young girl, nineteen years of age, who has been habitually constipated from childhood and is now suffering from dementia praecox. We have numerous histories of similar cases and there can be no doubt that these defects and abnormalities of the colon are inherited. It is still a question why, in the case cited above, the grandmother and mother should be free from mental disorder and the granddaughter and daughter develop the same. It is possible that the infection of the teeth and tonsils in this case, especially impacted molars, may account for infection added to the intestinal toxemia. There is no hereditary taint of insanity in this family, but the physical inheritance is evident.

We have found this condition in children as young as three and a half years of age and have operated on many cases from seven to fifteen years of age. In adults, some of the trouble is due to inherited factors, especially in the reduplication of the length of the descending colon, at times excessive in amount to the extent of thirty-six inches, and often congenital adhesions are the result of this abnormality. Coupled with this we have a chronic inflammatory process of the colon which may be traced to the infection of the teeth and tonsils.

We formerly thought that the infection traveled down the

intestinal tract, through the stomach to the colon, but we were surprised to find many patients with severe colon conditions had absolutely normal stomachs, normal hydrochloric acid content, and no infection. We have, therefore, to consider that the infection in reaching the intestinal tract may come through the stomach, and, which is more probable, may extend through the lymphatic system.

It is not necessary to spend time in arguing about sources of infection. It is enough to recognize its extent and the important rôle it plays in both mental and physical disorders. It is both surprising and alarming to note the attitude of prominent medical men in regard to this subject. There are perhaps not a dozen men in the country who realize the importance of intestinal toxemia in producing these various disturbances. Our work has been subject to severe criticism largely through ignorance of the real pathology of the intestinal tract. Dr. William Ochsner, of Chicago, recognized these lesions thirty years ago when making autopsies on insane patients at the Cook County Institution, Chicago, and the mother of the patient cited above was operated on by Dr. Ochsner ten years ago and relieved of her intestinal invalidism. He was the only one to recognize the symptoms, although she had consulted prominent physicians throughout the East.

At the meeting last year of the Psychiatric Society in Atlantic City, Dr. Lewellys F. Barker, of Johns Hopkins, while approving of our methods of eliminating chronic sepsis in the teeth and tonsils, was very severe in his criticism of our work on the colon, and this criticism was made without any investigation of the pathological conditions found in the colon, or the clinical results of eliminating this source of infection.

As to the treatment of these colon conditions, there has been divergence of opinion. Over twenty years ago Lane began resecting the colon or removing it to eliminate the intestinal toxemia. Under Dr. John W. Draper, of New York, for five years we followed this method of resecting the colon in mental cases. As a result of this work some three hundred patients were operated upon and seventy-five recovered from the surgical

procedure and also recovered mentally. The mortality, however, was high, 30 percent succumbing to operation. While this was justified in chronic insane patients who would never leave the institution, at the same time it was rather alarming to surgeons outside institutional work who rightly did not want to subject their patients to such a high mortality rate. Recently Sir Arbuthnot Lane has devised a method of releasing adhesions to correct the intestinal stasis, and for the last two years we have substituted this operation for resection whenever possible.

Our results with this method of procedure have been surprisingly successful. Over 37 percent of the patients operated upon recovered mentally and the mortality was only 10 percent. We have gradually improved the technique so the mortality is still decreasing, and we are now able to determine which case should be resected and which should not. In patients where there is a tremendous excess of descending colon the only method of procedure is resection, especially of the left side. This, fortunately, is not attended by any high degree of mortality, as we have never lost a left-sided resection case. In cases where the simple method of releasing adhesions has not been effective, we have had to resect the left side at a later date and have produced successful results.

We would emphasize one very important point, that these lesions are mechanical. The adhesions cause a mechanical constriction of the colon at various points, and no method has as yet been devised which will correct this condition except surgery. Drugs, diet, and other medical procedures, while they may have some effect on the condition do not correct the underlying trouble. Surgery, whether resection or release of adhesions, is the only method which gives permanent results. We have not only seen an immense benefit to the patient and mental recovery, but there has been a corresponding improvement in the physical condition. Some patients have gained as much as eighty pounds following this procedure. Contrary to the general opinion, they are not intestinal invalids after the operation. I would not want to see any finer physical specimens than the patients who have recovered both mentally and physically. One thing is certain, and

that is that these conditions should be recognized and treated long before the patient develops a psychosis.

Genito-urinary system. — Chronic infection of the genito-urinary system is quite common in both male and female patients. This, however, contrary to the general belief, is not a venereal infection. In the female, infections of the cervix (mouth of uterus), tubes, and ovaries are a frequent source of trouble. This infection occurs more frequently in child-bearing women, but it may be found in non-child-bearing women as well. Here the infection is caused by streptococci and colon bacilli and it can only be removed by surgical means. Enucleation of the cervix, which is a comparatively simple operation, has produced some remarkable results. There is no doubt that in mental conditions following childbirth the cervix is frequently infected. There may be other sources of infection as well. About 80 percent of our female cases, married and unmarried, suffer from menstrual disorders due largely to infection of the cervix.

In the male, the principal seat of infection in the genito-urinary system is in the seminal vesicles. Here again venereal infection apparently plays no part in producing this trouble. It is possible that antecedent gonorrhea may prepare the way for streptococci and colon bacilli infection found in the vesicles. Of this we are not sure, but we do know it occurs in many cases where there has been no gonorrheal infection. Probably in 25 percent of the male patients it is necessary to resect the seminal vesicles without any special harm to the patient.

Emotional Instability of Children

What has been said above in regard to chronic sepsis applies not only to frank mental cases, but to the emotionally unstable as well. We find that the source and type of infection are practically the same, but the effect on the individual, however, is different. The question might be asked, why should a definite infection as we have described produce so many varieties of mental disturbance? We can only answer that by citing other conditions, with which you are all familiar. The effect of alcohol is well known. A very small amount of alcohol, in the form of a

beverage, will produce marked symptoms in one individual, while a large amount in another individual produces no symptoms at all. In some individuals no psychosis will be produced, but the individual becomes irritable, neglectful of family and business, and soon falls in the social scale. At no time could he be considered insane. Another case with a similar amount of alcohol perhaps will develop delirium tremens, alcoholic hallucinosis, and alcoholic paranoid or delusional states. The same can be said of syphilis. Only about ten to fifteen percent of the individuals who have had syphilis develop lesions of the nervous system. This cannot be explained at the present time. It is possible here that accompanying infections may be responsible for the development of lesions of the nervous system. Thus, it is an analogous condition when we discuss the effect of chronic sepsis and toxemia upon different individuals.

In discussing the abnormal child, we must differentiate between the congenital defective or feeble-minded individual from birth, on the one hand, and the normal child who acquires these mental disturbances later on in school life, on the other. With the congenital mental defective case nothing can be done. In all probability the inherited condition was first responsible for the trouble, or possibly disturbances in intrauterine life. We do know the brain is abnormal, and consequently does not function properly, and we have a defective as a result. The emotional, unstable child may show no evidence of defectiveness, in fact they are frequently abnormally bright. We constantly see examples of this in our patients. The history shows that they are beyond their years mentally, and this is a very significant fact.

The first effect of cerebral toxemia is to stimulate the mental activity in the same way as a small amount of alcohol may, in many persons, stimulate mental activity. The latter effects, however, are just the opposite; there is difficulty in thinking, concentrating, and studying. This is especially shown in the recent case of Leopold and Loeb. These men were not mental defectives, as they were beyond their years in their school work. Although I have no personal knowledge of their condition, arguing from similar cases I have examined, I would unhesitatingly say they

were suffering from chronic sepsis and toxemia, and while not insane, at the same time not responsible. If these abnormal physical defects had been noted years before and corrected, I do not believe that such a tragedy would have occurred. I have seen several similar cases, where tragedy was luckily averted, which when subjected to the proper methods of detoxication gained their normal mental health and have since been normal members of the community. We have failed to find any case which showed a clearly abnormal condition when subjected to the proper examinations.

It would seem at first glance that there was very little resemblance in these cases, which result in tragedy, and the ordinary emotional child, but they are not so widely different as one would imagine and the principles underlying each group are the same. We see many cases of so-called maladjustment in children, even when the environment is the best that can be had and the training of the best; yet delinquency occurs. We see other groups of cases where the environment has been faulty, and training defective, and delinquency may be caused by such conditions. But in both groups I am of the opinion that the underlying factor of importance is chronic sepsis and toxemia. It is true that many cases put under proper supervision will survive this period and become useful citizens, but on the other hand many go from bad to worse, and finally end their existence in some correctional institution. I am fully cognizant of the deleterious effect of the environment and training, and realize that much can be done in certain cases, but to ignore the physical defects in these patients is a serious error which can only result in failure.

It is interesting to note that the unstable cases in correctional institutions rarely develop true psychoses for which they may be committed to the State Hospital, but this does not invalidate the fact that they are subject to chronic sepsis and toxic poisoning. I could cite many cases which would uphold this opinion and some I think will interest you.

One case is of special interest. A young boy, eighteen years of age, the son of a farmer in moderate circumstances, had inherited considerable money of which he knew nothing. He had had

good training at home and was sent away to school. There he became absolutely incorrigible, receiving so many black marks that he was expelled from several schools. Finally he began to steal things from his family, especially money, although he was given sufficient money for his needs. He became so bad that his father consulted a lawyer about the desirability of placing him in some correctional institution. He had been fairly bright in his studies, but later became negligent and found difficulty in concentrating and studying. Results of the examination showed a very marked stasis in the colon and we diagnosed his condition as colon toxemia. An operation was performed December 9, 1921, and total resection of colon done. He made an uneventful surgical convalescence, and for two or three months did not show much improvement in conduct. Later, however, his abnormal conduct ceased and since then he has become a normal citizen. In the meantime he got control of his money and reacted in a normal manner in every way.

Another case is that of a boy of six years of age who had been normal until two years of age. At that time he became very restless and unmanageable, so that his mother could not let him out of her sight. At the age of two he also developed convulsions which occurred every two or three months. He was sent to school, but was unable to remain. He made no effort to learn and could not be made to obey. He caused so much disturbance that he had to be taken from school. He was not vicious, but inclined to be destructive and silly in behavior. When I saw him, he showed hyperactivity of a purposeless type. He moved everything about the desk and if his mother relaxed attention he was in all sorts of mischief. His tonsils had been removed previously and his teeth showed nothing in particular. His second teeth had not erupted. Examination of the stomach showed very low hydrochloric-acid content with the presence of streptococci and colon bacilli in the stomach contents. X-ray studies of the intestinal tract revealed abnormality of the colon and very marked delay of the barium meal. There was also a history of severe constipation for years. An operation was performed November 6, 1918, by Dr. Draper and myself. The mesenteric glands were

found to be enlarged in the ileo-caecal region, and a large section of the terminal ileum, caecum, and ascending colon removed. The patient made an uneventful surgical recovery, and, much to the surprise of his parents and physicians, he remained perfectly quiet in bed and was no trouble to the nurse. His constipation disappeared. In a few months he began to show such improvement in his conduct that the following spring he was able to enter school. Two years later, in 1920, his mother reported that he acted in a normal manner, showed no peculiar conduct, and attended school regularly, and reports from his teacher showed that he had no difficulty in learning. While this case is not reported primarily on account of having convulsions, it is interesting to note that he has had no convulsions since the operation.

The third case is a boy of eight years of age who had chronic constipation since infancy. He never had a proper bowel movement without taking laxatives. He had had so-called bilious attacks all his life and his mother devoted her whole time preparing special foods and dishes to tempt his appetite. He had four brothers and sisters, all normal, robust children. He quarreled with them constantly. As time went on, despite his mother's efforts, from being thin he became emaciated, complained of constant headache, increasing constipation, and backache. His temper, always bad, grew to be intolerable; he flew into violent rages without cause, or became moody, sulky, and depressed. In spite of his youth he was suicidal, being afraid to go in a row-boat for fear he would throw himself overboard. Finally, in a fit of uncontrollable rage, he tried to shoot his father with an air gun. X-ray studies revealed a six-day delay in the right colon. At the operation the impaired part of the bowel was found to be confined to a relatively short partially obstructed segment on the right side, and this was removed in 1920 by Dr. Draper. In January, 1921, it was reported that there was a fifteen-pound gain in weight; he had no constipation and had taken no medicine since the operation; and that he was working hard and successfully at school. His temper, appetite, and general behavior was that of a normal child; he was now no different from his brothers and sisters. The report since that time shows a steady progress.

One might go on citing cases indefinitely, but these illustrate the principle we are trying to establish. What we have said about the emotional, unstable child is also true of the sex offender. I am constantly consulted by the parents of young children who have already developed abnormal sexual habits. Also some of the boys of the Reformatory have been sent to the State Hospital because of abnormal sex practices. In a number of these we have found that the cause was an underlying chronic sepsis and toxemia, and in a number of these cases the colon has been resected with improvement in the individual and cessation of the abnormal practices. Formerly one considered the abnormal sex practices, such as masturbation, to be the cause of the mental derangement; now we know that they are merely symptoms of this condition and not the cause. This applies to cases with frank psychoses. The general belief on the part of the laity for years, undoubtedly fostered by reports from institutions for the insane, was that most mental conditions were the result of sexual abnormalities and excesses, so that when a member of one's family became insane it was more or less of a disgrace, as the friends and the community immediately associated the mental trouble with some sexual excesses. We have seen a number of cases in the Girls' Reform School suffering from emotional instability, hysterical outbreaks, and general delinquency, as well as sex offences. If the case is not congenitally feeble-minded we have not failed to produce results by detoxicating these patients.

The principle outlined above applies to the emotional child as well as to the emotionally unstable child or frank delinquent.

Prevention

I hope I have impressed upon you the significance of the physical defects of the school child. By proper examination and treatment of these conditions during the school years two very important results will be achieved. First, we will undoubtedly limit the number of abnormal children who have to be treated in special classes, and second, probably the most important, we will prevent a later occurrence of serious mental disorder.

In Ohio the rate of cases of mental disease in institutions is 212 per hundred thousand population. This is not as large as New York and Massachusetts where the rate is 374 and 373 respectively per hundred thousand population. We have shown by our work at the State Hospital, Trenton, that all these cases can be restored if treatment of detoxication is instituted early in the course of mental disorder. We have been able to restore 87 percent of the patients in the so-called functional group in which the recovery rate prior to 1918 was only 37 percent. In figures this means that sixteen hundred patients have been discharged from the hospital as recovered in the last seven years and that these patients have remained normal during this time. Recurrences have been surprisingly small, and there are only about one hundred patients in the hospital today who have had a recurrence of mental trouble. If we can accomplish such results after the disease has progressed to the point where serious mental trouble has occurred, it is not unreasonable to assert that had the foci of chronic sepsis been eliminated during the school years these patients would not have developed mental trouble. I hope, therefore, that you will see the importance of thorough examinations of school children between the ages of ten and eighteen, not alone those who show abnormal mental symptoms, but those who are apparently normal. They may be harboring infection at that time which later will produce a psychosis.

As I stated, the rate in Ohio is 212 per hundred thousand, so you can be sure of this proportion in your school children, and the time to prevent the occurrence of a psychosis is during these years. While I have spoken largely on the question of chronic sepsis, I do not ignore the question of environment, emotional and mental causes as precipitating factors of mental trouble, but in seven years' experience I have failed to find a single case which was not harboring some foci of infection. Dr. H. H. McClellan of the State Hospital at Dayton, in examination of some twelve hundred patients, found over three thousand foci of infection in these cases. It is very gratifying to know that Ohio has such a progressive attitude toward our work and that Dr. Barber, of the

Longview Hospital, Cincinnati, and Dr. McClellan, at Dayton, have been able to corroborate our findings.

We have to guard against the activities of the psychoanalytic school. The Freudian theory is based largely on the question of sex, and we do not hesitate to say that their theory is all wrong. In the sixteen hundred discharged from the hospital recovered, the sex question was never discussed with the patient or alluded to in any way. This would seem to be proof enough that the sex problem plays a very insignificant rôle, if any, in the production of the psychosis. There are a number of investigations going on now, notably in the Laura Spillman Foundation for the study of children from the ages of two to six. This work is based largely on the Freudian doctrine that the bad mental habits formed at this time result later in a psychosis. I maintain that is impossible, that this work is superfluous and will lead to nothing. It is impossible to determine in a child, from two to six years of age, symptoms which if not corrected would bring on a psychosis in later life. Millions are being spent in such a useless investigation, and it is hard to see how any good can come from such a survey.

If I have been able to impress upon you the importance of physical disturbances in producing, not only emotional instability, but delinquency and later in life a psychosis, I feel that my time has been well spent. As Ohio is so progressive, I feel confident that this message will not fall on barren ground. As educators you have a tremendous responsibility, for you are the ones to notice abnormalities in your pupils long before the families realize anything is wrong. I would make a strong plea for a more thorough examination of school children between the years of ten and eighteen, and the elimination of chronic foci of infection during these very important years of the child's life.

COMMERCIAL EDUCATION

W. L. Moore, *Longwood High School, Cleveland,* Presiding

ORGANIZATION OF ELEMENTARY TRAINING FOR BUSINESS

J. O. Malott
Yeatman High School, St. Louis

The core or basic content of our commercial curriculum and the organization of it must be remodeled in accordance with the demands placed upon it. In the past, the core of our commercial course has been changed to comply with the changing business needs and the commercial teacher's analysis of them. Today, we are seriously in need of a new core for the commercial curriculum. Shall we keep our outworn traditional core? Shall the new core be superimposed through the social sciences? Shall we have it determined by textbooks? Or shall we take the initiative and, in the light of our present data, apply our best educational theory in rebuilding the core of our commercial course?

Since the inception of commercial education, it has been the victim of traditional acceptance, expediency, and available textbooks. Only in recent years, have the various theories of content and objectives based on our philosophy of education determined to any extent the organization of commercial education. Fortunately, there is an increasing demand to apply the latest educational philosophy to commercial education.

The beginning of commercial education, briefly stated for purposes of our study, was merely formal penmanship and mathematics. Soon we found geography and commercial law as adjuncts. The mathematics became definitely commercial arithmetic. Later the emphasis was placed on the equalization of accounts. The next step was the beginning of paper work, which was at first rather unrelated, until finally the bookkeeping texts and sets were developed. Shorthand and typewriting were added to the curriculum. Pause with me on this fact—the basis or core

of the technical commercial training, which was to constitute for the pupil his preparation for the initial job and his foundation for training in business, was at first penmanship and arithmetic. When arithmetic had been so modified as to be worthy of the name bookkeeping, then bookkeeping became the core of the training, because those taking the course were actually preparing for that vocation. Thus penmanship and aritlimetic were replaced by a content indicative of what the students would do upon leaving school. By the time shorthand and typewriting were added, bookkeeping had become he recognized core and a differentiated core for boys and girls was slowly adopted even by cities where there was greatest need. This changed conception of core material has been only partially accepted in spite of the overwhelming and conclusive evidence from surveys. Even in instances where the core differentiation was accepted, it was accepted reluctantly, because there was a vague feeling that the new core was insufficient. With this background for the changes in core material, I want you to correlate the changes and developments in business and business facilities.

The courses in bookkeeping, shorthand, and typewriting filled a need and are still filling a need. Today, there is a need they are not filling—a commercial situation, a composite of several conditions which remain largely unsolved. The core of the traditional courses alone as they are now organized does not fulfill the major theses in education. They are not satisfying entirely our new conceptions of commercial education. They are not revealing or making possible or desirable the higher functional activities. They are not meeting the present demands of the modern office. They are not providing sufficient training for immediate placement of the junior who leaves early, nor are they providing the right kind of training for those who wish to continue in school. The reason why the traditional courses have failed in these tasks is that the core material has remained practically the same during a period when the needs have changed.

Whatever may be one's conception of education in general or commercial education in particular— it must be to make easier a more complete and satisfying adaptation to one's environment and

aptitudes. The first duty, then, of a school is to teach the students to do better the desirable and worthy things they are going to do anyway, reveal higher activities, make them desirable, and to an extent possible. The second is that courses should be arranged and taught so as to be of value so far as possible to the extent pursued. To apply the above theses of Dr. Thomas H. Briggs, Columbia University, to commercial education will require a new structure or architecture of the commercial courses, it will require a reorganization of content and method of presentation; it will require a new core which must not only be an approach to the solution of the junior problem, but a beginning of the solution of the general clerical problem and at the same time serve as the basis for higher specialization and differentiation in the eleventh and twelfth years.

By the term core or basic content of the commercial course, I shall mean, not only the lower or basic part of the complete structure, but also that which shall be considered the fundamental business elements from which a start in specialization may be made by either boys or girls. This core should include a course in common business services in the eighth year, followed by as much of two years of general business practice as is possible. The former should be taught for its general information. The length of time devoted to it will determine whether you can teach only the services rendered to the community by each or whether you can also teach in detail how properly to use each of these services. The latter should be a general office-practice course in the specialized functions in business. It should be distinctly vocational for those who leave early, and a preparatory course for those who remain. It should be so unified as to be of general information and practice.

The need for a new core is revealed through a study of the clerical problem. This is one of the outstanding problems in commercial education, as shown by many surveys. The St. Louis Senior Commercial Occupational Survey shows that sixty-six percent of the commercial workers are in occupations not basally stenographic or bookkeeping. The table of frequency of positions open as tabulated from the help-wanted advertisements of the

leading daily newspapers in St. Louis shows seventy-one percent. All commercial workers excluding salespersons—are doing similar clerical work, thus correlating closely to the survey. Other surveys show that as many as eighty percent are doing clerical work. The Federal census shows 151 kinds of clerical positions in which no typewriting, shorthand, or bookkeeping is used, to only twenty-two kinds in which some is required. Believing in our first thesis, we would conclude that the core of the commercial curriculum should be a course in common business services in the eighth year followed by a general clerical course organized according to the functions in business. The latter course we may call general business practice—the when, the what, and the how of the course to be determined.

We endeavored to analyze this 66 to 71 percent more closely by going to records of a number of schools. We found that 29 percent of the four-year commercial boys and girls graduate, while an even 50 percent of the two-year boys and girls finish their course. Thus, we have an average for four terms of 42 percent of all commercial boys and girls finishing the course for which they enrolled. These data are remarkable, when it is recalled that throughout the nation—the average approximates only 20 percent. Nevertheless, these 58 percent that leave early are provided for in every possible way during their brief stay. It is imperative that commercial teachers throughout the country provide for that 58 to 80 percent who do not graduate.

Focusing our attention on the ninth year, we find throughout the country from 33 to 40 percent of the pupils dropping out of school during and at the close of the ninth year. About 20 percent of those remaining drop out during or at the close of the tenth year. These facts alone should challenge the acceptance of the traditional conception of commercial education with its deferred value. A study of help-wanted data and positions, which these juniors fill, should challenge the content and method of procedure in the traditional courses. A study of retardation and individual differences should challenge our failure to provide sufficient differentiation for the thought-minded and hand-minded pupils. The fact that less than 5 percent of our workers are

bookkeepers and only 10 percent of the workers are stenographers should challenge the continuation of either of these courses as the core of our curriculum, when from 66 to 80 percent of our workers are clerks. General business practice or some similar course or courses should be given to all commercial pupils as the basic course upon which would be built the specialized courses in the eleventh and twelfth years. The bookkeeping course would be an entirely different course and belongs after the general business-practice course, not in place of it. None will deny that the intellectual maturity for successful stenographic work is seldom reached before the eleventh and twelfth years. The eleventh and twelfth years should be free also for other kinds of specialization.

There is no question in my mind but that a course, emphasizing the basally clerical, the specialized functions in business, and serving as the second unit of the core of our curriculum, should be given. If it is given, it seems imperative that common business services should be given in the eighth year and general business practice in the ninth and tenth years. There is, however, a question as to what should be included in it and where the emphasis should be. A rather vague conception of content has been realized for years and has been forcibly called to our attention through recent surveys. Different cities and authors of textbooks have been seeking a solution. Many elementary office-practice texts have been prepared, and it is to be noticed that each new text covers greater scope in greater detail and with practice sets. At present, this clerical work is being taught from one to four terms, with a tendency to teach more instead of less. Consciously or unconsciously they are replacing the old core of the course with a clerical core. They represent attempts at the solution of the clerical problem. It seems that bookkeeping has lost its struggle to remain the core subject. It no longer suffices as adequate core material, and it recognizes its own deficiencies by trying to enhance its content. Furthermore, we know that none of the other traditional courses can serve as a comprehensive and satisfying core.

To apply our theses to the question of what should be the con-

tent of this clerical course, we would have to ask ourselves a number of questions; such as, What are the activities our pupils are likely to do anyway? Which activities are desirable? For which shall we assume the responsibility? In training for these activities, how can we best reveal higher activities, make them desired, and to an extent possible? What shall be the relation of the material and its presentation to such items as individual differences, elimination, percent of graduates, retardation, acceleration, compulsory-attendance laws, and the integrating, differentiating, and propaedeutic functions?

Without discussing each of the above questions, we might suggest the following content for the eighth grade: a general informational course for exploratory and educational purposes to acquaint the pupil with the common business services, the ways in which each functions in our lives, and the proper use of each. The job should not be emphasized.

For the first half of the ninth year there should be an introduction that would explain business, the office, and ranges and levels of jobs. The personnel and business etiquette should include sources of information regarding employment, securing the position, getting along best with the employer, the public, the coworkers, others working for you, development of the worker for promotion, and personnel records. Those junior positions and duties that are common to the different departments and are not directly linked with the routine should then be covered in detail for vocational purposes. This should include mail clerk and postal information; telephone switchboard operating, handling the phone, telephone information, and the directory as an office reference book; handling telegrams and telegraphic information; filing; and lastly I would present an elementary set of papers for a business enterprise to give a preview of the functions of each department and the work that was to follow.

During the remaining term or terms have the pupil serve in apprenticeship fashion in each department and at each function of the business. The order of his apprenticeship in these departments should be the logical routine in small cycles such as receiving, stock, and purchasing. In each of these departments he

should be confronted with the problems of the department, the business principles involved, methods of solution, office reference books, contacts with outside agencies, proper use of the equipment, purpose of the forms, and how to make and preserve them. This departmental work should reveal the problems in each business function, combine information and practice so as to bring out the interrelation of departments, and a clear understanding of the relation of the bookkeeping accounts to all of the related and subsidiary work. There should be sufficient practice sets to make it a basic clerical course. This paper work should be prepared in sets as in actual business in order that it might be unified. It may be necessary to start with a few elementary preview sets or short cycles of functions entirely within either the getting or distributing phase of the business.

The vocational opportunities for those who will intensively specialize in a particular department or function should be revealed. This revealing of higher activities should be as pragmatic as possible for the pupils. It should take into consideration and differentiate between specialization within business and training for business. It should show how the one grows out of the other and is dependent upon continued study beyond a common core of content and other factors.

The above presentation of the training for the different departments ought to develop the perception of relationships with outside services as well as relationships within a business. This content can be organized in a course of unified sections, each section covering a definite function in business as well as the clerical positions. It opens the door to from 66 to 80 percent of the positions and offers a try-out program on which to base later specialization. It serves those who leave early as bookkeeping or stenography serves others. It is distinctly a vocational course for the former and a preparatory or general information and practice course to improve the work of the latter. It fulfills the theses in education. It teaches them to do better the desirable and worthy things that surveys and activity inventories show they are going to do anyway. Properly presented and with proper vocational guidance, it will reveal higher activities and make them desirable

and to a certain extent possible. It will be of value to the extent it is pursued.

This general business practice, whether given for two, three, or four terms, has greater possibilities as core material for training clerks than has the traditional bookkeeping. This course not only presents all the related and subsidiary work to bookkeeping, but reveals many higher types of activity in specialized business functions. Furthermore, with a comprehensive knowledge of the specialized functions and business procedure, added to our present academic and commercial background subjects and social sciences, we will be better prepared to teach the senior subjects. It leaves for bookkeeping in eleventh and twelfth years only the abstract, whereas our present systems of bookkeeping require that we begin at the top and build downwards. We are beginning at the top with the statements and near the top with accounts. We must first make our foundation, a block at a time, and build upwards the superstructure of bookkeeping and accounts, and then, and then only, will we have solved the major part of the big clerical problem and the larger problem of preparing pupils to reach the higher levels in their chosen range. In the third and fourth terms of business practice, as the core material, one could teach sets in retail, wholesale, and manufacturing, but entirely different from the present. It would be handled as clerical work in the departments, but related or centered in the accounts.

It would be an excellent preparation for those who continue in bookkeeping, as bookkeeping is the superstructure built upon such subsidiary work. With the emphasis on practice, the hand-minded pupils will be more apt to get some junior vocations, while the thought-minded pupils will be in a better position to grasp the abstract side of bookkeeping and accounting, when they approach it. This method of presenting it will tend to vitalize the subject and the pupils will see clearly the duties and interrelations of the departments. It presents the subject in the natural and effective way, just as the pupil will meet it when he leaves school. It will enable us to teach one or more junior occupations to the entire 100 percent of pupils enrolling in the commercial courses, while the present system with its deferred values

prepares only 25 percent vocationally. The survey and help-wanted data show clearly that the pupils leaving without a major vocation get into these specialized minor vocations. The employment and advancement are both dependent upon their knowledge of these subsidiary positions and the superstructure built thereon.

In closing, there are three outstanding facts that recommend this problem to us for prompt and careful attention.

First, we must bear in mind that the junior high school is growing rapidly and that wherever it is established, it forces a reorganization of commercial work. It is accepting common business services in the eighth year and elementary-office practice in the ninth year. In most instances they contemplate no formal penmanship, but expect to maintain a satisfactory scale in functional writing. There seems to be a tendency to drop commercial arithmetic and make it function in business practice or in the academic courses in mathematics. There seems to be less differentiation in English except in the eleventh and twelfth years.

The second fact is that there is a pronounced tendency to revise the course of study. There is a tendency to make the social studies the core of the content in secondary education just as common business services and practice are considered the integrating forces for a vocational and sympathetic preparation for relations in business. Because of these two tendencies, it behooves each of us to participate in the movements and provide for sufficient differentiation in academic subjects for the commercial student.

Lastly, the demands of business have shifted to a clerical basis with specialized functions and hence require a new core for commercial training. We should encourage this new core material if we feel it is the best basic core for both boys and girls up to the eleventh year, when specialization should begin; that it stresses the functional phases of business; reveals higher activities; brings out better the meaning back of all the work; serves as a better guide through the clerical work to the higher functions in business and to business itself; embodies a big portion of the paper work better than bookkeeping; that two, three, or even four terms

is not out of proportion when 80 percent are clerks compared to less than 5 percent of the commercial workers who are bookkeepers and for whom we teach it four terms. If we believe in this core material to this extent, it is our duty to encourage it. If we do not accept it, then we must hasten to provide a new core before business practice takes too deep a hold.

COMMERCIAL EDUCATION FOR INDUSTRY

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In considering the subject of commercial education for industry, we need to go back of the immediate field and look at life itself for just a moment. We are living in a complex age. Civilization and society are evolving along more and more intricate lines, and this complexity of life has carried over into business. One has but to think a minute to realize that industry and business are no longer the simple matters that they were some twenty-five or even ten years ago. This means that those who are going to pursue business or industrial work as a life occupation must have trained minds, and must be capable of great activity.

It follows, therefore, that our commercial schools and the commercial departments of our high schools must raise their standards. Often a student is somewhat of a failure in the classical course or in the scientific course and so he goes over into commercial work. I am glad that our school people recognize the shortcomings of a system which permitted this condition and raised their requirements.

Today, and in the future, with the many-sided activities of business to consider, the keen competition, the demand for well-trained minds, it is going to be necessary for our schools to establish standards that will insure a high type of student and of graduate.

One of the first things that industry notices in the students that come in from our schools to begin their work in business is a lack

of proper knowledge of the fundamental subjects. I imagine the reason for this is that schools have been laying stress on the so-called newer subjects, manual training, domestic science, music, art, commercial studies, vocational studies, and athletics. Therefore, my first suggestion is that no matter how much time schools devote to these subjects they do not lose sight of the necessity for practical training in arithmetic, spelling, and geography and that they give pupils a background of literature, current events, some history, and if possible a little economics and sociology. A knowledge of the latter, economics and sociology, will make for more contented employees and insure them to some extent against bolshevistic ideas.

With the discovery just outlined, another fact is obvious, lack of originality and initiative on the part of students. This is due, doubtless, to the method of training in schools where students depend a good deal upon their teacher, and where it is possible for them to secure help and assistance without very much effort. I would suggest to you as teachers that anything you can do toward developing originality, initiative, and a sense of responsibility in your students will mean that they stand a better chance of advancement when they get into business.

The next thing that we feel students need to be given in their school work is a better conception of business, a more complete idea of its nature and also some idea of what business conduct is like. One way to gain an idea of this is to visit offices where business is actually being transacted. Let them step into a bank, for instance, and compare the "atmosphere" there with that of the ordinary school. Another way to give students an idea of the general nature of business is through the medium of organization charts. By these charts they can be shown both the general functions and departments of a business and also how the various departments are related and dovetailed into each other.

Teachers and school authorities generally should avoid giving pupils an exaggerated notion of their importance. They have been led to think that they are very valuable, and they are likely to get discouraged if rapid promotion does not follow. The idea that should be given to them is that advancement does not come

overnight, and the necessity of acquiring experience should be emphasized.

Furthermore, teachers themselves must know something about business. This means something more than just a theoretical knowledge gained from textbooks. It seems to me they should have the practical knowledge that comes from actual contact with business and the only way they can get this knowledge is to visit and, if possible, do some actual work in offices and factories. Another thing they can do to add to their knowledge of business and to give them perhaps more of the business viewpoint is to attend the conferences of business men.

Now there is a point at which the training that a pupil can get in school stops, where the knowledge that he must get from actual business experience begins. It seems to me that *schools should endeavor to teach fundamental principles* and should not attempt to teach systems. In bookkeeping, for instance, they should not try to teach particular bookkeeping systems, but should teach the principles of bookkeeping. Industry must make the application of the principles that pupils have learned in school, to its own business or system. It is a well-known fact that practically every business or industry does have its own system of bookkeeping or accounting. Too frequently, however, pupils come to industry with set ideas of "how it should be done." When their ideas clash with the practice of the industry in which they are employed there is trouble.

My next point may be somewhat of a surprise to you and yet I would not feel like leaving this subject without mentioning it. All of the features that I have outlined are desirable. But we desire something more, namely, that students come to us with a high degree of character and moral stability. It is strange to see how many people have a peculiar code of morals when it comes to working for a big corporation. Students who would not steal money do not think anything of killing or sneaking a little time during the course of the business day. So, I would not have the schools forget that the most important thing of all in connection with the kind of training they give to students is to see that their character development is not overlooked.

Now the foregoing cannot be accomplished unless business men cooperate. Business men and industrial leaders must let school people know that they are human, that they are willing to help, that they are desirous of having students visit their plants and their offices, and that they are willing to have teachers work in their offices. This may mean a temporary expense to the business institution but it is a good investment in the interest of better future employees.

So, I feel that a closer bond between school people and industrial people is desirable and necessary if the most in the way of student training is to be accomplished. I believe that if this bond can be established more closely, the desirable features that I have outlined will be brought about. Students will come to us better prepared in the fundamental subjects; they will have a better conception of the nature of business, and of proper business conduct; they will not have such an exaggerated notion of their own importance and will possess a better idea of service; teachers will understand business better and will be able to impart a clearer notion of it to their students; and finally business will benefit by getting a better grade of students and the students themselves will benefit by being able to progress faster and accomplish more.

CONSTRUCTING THE COMMERCIAL CURRICULUM BOOKKEEPING

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As noted by many students, the data upon which intelligent guidance can be based is also the data on which a suitable curriculum can be constructed.

For the past seventeen or eighteen months, there has been at work in Cleveland, a committee trying to determine the location of bookkeeping in the commercial curriculum and trying to construct a sensible course of study in bookkeeping.

The committee, appointed by Chas. H. Lake, the assistant superintendent of schools, was composed of five persons: Wm. L. Con-

nor, director of research of the Cleveland Board of Education, *chairman,* three teachers of bookkeeping, and the writer, who represented vocational guidance, placement, and accountancy.

On the basis of the figures collected by the Vocational Guidance Committee of the Schoolmasters' Club, the Bookkeeping Committee believe that the bookkeeping curriculum should run parallel to the shorthand-typewriting curriculum, rather than be combined with it. In other words the data we have at hand show that stenographer-bookkeepers in Cleveland are practically extinct, being but 1½ percent of the total number of commercial workers represented in the above study. Furthermore, because of the great prominence in this report of general clerical workers especially at the ages sixteen to twenty and the prominence of bookkeepers at the ages twenty to twenty-one, it was believed that bookkeeping should be put off to the end of the high-school course and should be preceded by a course in general clerical service which will prepare pupils who leave school early for clerical positions and, should they continue in school, prepare them for the bookkeeping course in the eleventh and twelfth years.

In order to determine the content of the subject itself, two methods have been adopted:

First.—An analysis was made of the kind of financial information business men must have in order to safeguard their credits and working capital, to determine their profits and losses at stated intervals, and the causes for them, to control their administration through a knowledge of unit costs, and to render proper reports to governmental agencies. A study was made of the special financial records demanded by the Federal Reserve and member banks as a basis for credit and by the Federal and State Governments as a basis for income taxation.

Second.—An analysis was made of what bookkeepers at work in offices actually do today to provide this information. In order to determine this, a number of bookkeepers and accountants and business men were visited personally and lists of duties made. These duties have been set up as the objectives of knowledge and of skills, together with traits of character important to the worker.

Here is one example of the field work done: In gathering this information we found in interviewing the worker that he might with conviction declare himself to be an accountant. In talking with his employer the boss would say, "This chap is simply a bookkeeper." But when we made an analysis of the job, we found this worker doing general office work without applying a single principle of bookkeeping and accounting, and had to list him as a general clerk.

There are still two jobs before the Bookkeeping Committee: (1) The collection of practice matter and material which will enable the teacher to present the subject so as to meet the objectives. (2) The arrangement of the practice material in pedagogical manner by semesters. When this last job is completed we hope to have a scientifically constructed course of study properly located in the curriculum.

COUNTY SUPERINTENDENTS

J. W. Fichter, *Superintendent of Butler County Schools,* Presiding

ORGANIZATION AND FINANCIAL SUPPORT

George A. Works
Cornell University

It will be the purpose of this discussion to raise certain problems relating to the administration and financial support of rural schools that are intimately related to the general theme of this conference, "Democracy in Education." It appears to one that, in our haste to secure a certain type of mechanical efficiency in our school systems, there are certain aspects fundamental to education in a democratic society that are in danger of being overlooked. It is believed that failure to recognize these aspects will, in the end, seriously militate against the growth that must characterize education in a society that is imbued with democratic ideals.

As a further introduction to this topic it should be said that the questions raised, although likely to be found in an accentuated form in rural communities, are not necessarily limited to education in these communities. There is a possibility that in our newborn enthusiasm for rural education we may overlook the fact that education in the rural community is only an aspect of the complete educational problem of a state. In the past the tendency has undoubtedly been to ignore, in a large measure, the existence of conditions in the open country that made desirable, and in many instances necessary, special adaptations in meeting its educational problems. Now that a reaction has set in, the attention that problems of rural education are rightly receiving should not result in isolating this aspect of education. Rather it should have a full consideration as a part of the program of public education in a state. The end to be sought is the adequate recognition of the problems peculiar to education in the

open country. In this discussion the term "rural education" may be used as if it were an isolated problem. This use is always with the reservations previously suggested.

The rapid increase in school expenditures during recent years has brought financial support of schools to the fore. The result has been a careful scrutiny of methods of taxation for school support and a thorough consideration of apportionment of state aid to local schools. When the school year was brief, the salaries low, and the young people stayed in schools for a relatively few years, the burden of local taxation for school purposes was not excessive. Under those conditions the method of apportionment of state funds to local schools was not as important as under present-day conditions.

These changed conditions are making more apparent a heavy handicap that a great deal of the open country is under, in providing educational opportunities that are equal to the demands of the present day. This handicap is a relatively low tax-paying ability on the part of the open country. Unfortunately there are not enough reliable data with reference to the comparative wealth per teacher of rural and urban school systems so that final conclusions may be drawn.

In the rural-school survey of New York State it was found that the wealth per teacher in country schools was only slightly more than one-half as much per teacher as it was in cities. Evidently this disparity in ability to support schools places the rural districts of New York State at a marked disadvantage unless there is recognition of their handicap in the apportionment of funds. To the extent that this condition exists in other states the same general statement may be made.

Another measure of ability to support schools, and perhaps even better than wealth per teacher, is income. Unfortunately, sufficient data are not at hand for final conclusions, but the report of the National Bureau of Economic Research contains statements that are significant in this connection. The following statements are from that source:

"The gross value of the output per person engaged in agriculture is about the same as the average annual earnings of factory or railway employees.

From this gross output, however, the agriculturist must subtract payments for interest, insurance, fertilizers, machinery, etc., before arriving at his net outcome and this net outcome includes not only payment for his services but also for the use of any property which he may possess and for any farm labor performed by his wife or children. It seems clear then that when farm laborers and farmers are considered as a joint group, their economic condition, if measured in monetary terms, compares favorably with that of the employees of railways or of manufacturing concerns.

It is a fact worthy of comment that while about thirty percent of the gainfully employed persons in the United States are engaged in agriculture, the industry normally receives only about seventeen percent of the national income."[1]

"The indications . . . . that farmers, even though they are entrepreneurs, and belong to the class usually considered to consist of men of higher talents than mere employees, nevertheless obtain on the average less money value in return for their efforts than do the average employees in most lines of industry. Only in 1918 and 1919 did they receive more than the average earnings for all employees in the United States, while in 1920 their rewards fell to a mere fraction of the average wage in other lines of industry. Even though the same money will buy considerably more of certain commodities in the country than in the city, it nevertheless appears that the average farmer can scarcely with justice be considered a pampered child of fortune."[2]

These statements, made by impartial authorities after a careful study, are significant. A democratic society cannot be maintained without equality of educational opportunity up to certain minimal standards that are adequate to meet the needs of the great majority of the members of such a society. This condition cannot be secured and maintained unless provision can be made for financing schools on such bases as shall bring approximately equal financial burdens to communities having the same educational offering available to their youth.

Rural communities, in so far as they have relatively low tax-paying ability, will profit by plans for financing schools in which cognizance is taken of variations in ability. This is all that should be asked. In this connection, however, it is well to bear in mind that for the county as a whole the increase in urban population has for several decades gone on much more rapidly

[1] *Income of the United States.* New York, National Bureau of Economic Research, 1922. Vol. II, p. 61 ff.

[2] *Op. cit.* Vol. II, p. 84.

than has the growth of rural population. The continuation of this trend and the accumulation of wealth in the urban centers may make it difficult to obtain legislation that will place the financing of schools on equitable bases. Meantime the disparity between educational opportunity available to country and city children may grow even more marked than it is at present.

The consideration of increased school costs, to which reference has been made, has been accompanied by a great deal of consideration of equalization of educational opportunity. In general this consideration has rightly laid much emphasis on the importance of equalization of tax burdens as a means of making possible equality of educational opportunity. It is well, however, to bear in mind that the equality of the tax burden and the equality of educational opportunity are not necessary concomitants. Certainly this is true in an educational organization in which so large a measure of responsibility is placed on local school units as is true in our several states. Under our educational organization they will occur together only as the layman is brought to an intelligent appreciation of the function of education in a democratic society. This makes it necessary that those who support education have a growth-attitude toward its place in an expanding civilization.

There are evidences that some advocates of equality of educational opportunities are in danger of losing sight of the fundamental aspect of educational support. This view is manifested in the statement that equality of educational opportunity is the only end worthy of consideration in the distribution of state aid to local school units.

The following statements may serve as a means of introducing this point of view:

> Equality of educational opportunity for all children of the entire state and equality of school burdens . . . . constitute a brief but correct statement of the aim underlying general aid, that is, state and county aid.[3]

> The fundamental considerations which should determine the state's contributions to the local system may be listed as follows:
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> 1. The need of the local community measured in terms of the cost

[3]Swift, F. H. *Public Education in Oklahoma.* Washington, D. C., Bureau of Education, Department of Interior. 1922. p. 65.

necessarily involved in providing a minimum educational offering to all children residing within the school area.

2. A uniform local tax based upon an equalized assessment throughout the state.

3. State support to make up the difference between the amount produced by the uniform local tax and the amount required to maintain the minimum acceptable program of education.[4]

It may be accepted as a principle of democracy that the education of its youth is the duty and responsibility of the state; that the state should make available for every child a satisfactory opportunity; and that the cost of this satisfactory minimum should fall equitably upon the taxpayers of the state. It is understood that the application of this principal should in no case bar any community from providing an educational program more extensive than the accepted state-wide minimum program.

It is contended that the above aim is the primary aim of state aid given to localities in the support of public schools. Giving special financial assistance to those communities that make greater local effort, as indicated by a superior offering or by a higher tax rate, may be effective as a means of bringing about progress. Fundamentally, however, such special aid is not indispensable to such progress. It is simply one means for encouraging communities. In the case of equalization of educational opportunity, however, state aid is a fundamental concomitant. Equalization of educational opportunity cannot exist without state aid.

It would seem highly desirable in the development of any system of state aid first to determine what the equalization of educational opportunity demands and then to examine each proposal that seeks to attain some other aim, for the purpose of determining to what degree, if any, it introduces inequality of burden. The advantages to be gained should be weighed over against the degree of violation of equalization of the burden of the minimum satisfactory program. This is the method of attack followed in this investigation. The demands of the principle of equalization of opportunity are analyzed and built into provisions of a general nature. The procedure to be followed in measuring the unbalancing effect of proposals having other ends to meet—such as payment for effort—is then illustrated. The actual analysis of such proposals may then be made as they present themselves in the further interpretation of these general provisions in building up a detailed plan for a system of state aid.

The determination of the relative size of the educational tasks faced by the school districts of the state is one of the necessary steps before state aid may be analyzed from the standpoint of equalization of educational opportunity. Such determinations are necessary also in setting up adequate state-aid programs.

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[4]Strayer, G. D. "Financing Education on a Scientific Basis," *School and Society*, 21:243-47, February 28, 1925.

The educational task faced by a community is roughly proportional to the number of pupils to be educated. It is not exactly proportional to the number of pupils, since it costs more to provide secondary education than elementary education, and it costs more to educate a child in a sparsely settled community than in a city or village.

In this report, the unit used in measuring each community's educational task takes into consideration these differences in cost. It translates the number of pupils for whom educational facilities have to be provided—whether these pupils be high- or elementary-school, rural, village, or city pupils—into a common denominator, namely, the equivalent number of elementary pupils in a village or city elementary school having more than 142 pupils in average daily attendance. The "weighted pupil" used as a unit throughout this report may be so defined—a pupil receiving his schooling in an elementary school of more than 142 pupils in a village or city of the State of New York.

The basis for making this computation is derived directly from and based solely upon the actual average cost in the different areas of the State of New York, of providing equivalent elementary- and high-school education in the various types of communities and sizes of schools.[5]

The amount was set at $70 per weighted pupil because it was found that this was the sum expended by the places that had approximately the average valuation of the State per weighted pupil.

On the assumption that the fundamental purpose of the system of state aid should be to achieve a reasonable educational offering to all children in the state at a cost which is distributed equitably throughout the state, the proposed plan is frankly an equalization plan and nothing more. It does not claim both to equalize and to reward effort, because . . . . to the extent that the state rewards effort by taking from those who do not—often because they cannot—make the effort, it destroys equalization. The proposed plan, instead of offering a reward for effort, requires every community to make a certain uniform minimum effort, the state then undertaking to supplement that effort to the extent necessary to achieve at least the standard set. Beyond this point it permits each community entire freedom to go as far as it pleases, within the set restrictions such as tax and debt limitations.[6]

The plan proposed for New York State has been given in detail as it is a definite application of the principle of equalization

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[5]*State Aid for the Public Schools in the State of New York.*

[6]*Op. cit.*, p. 15.

of the burden of school support and it is, therefore, possible to make an analysis of some of the probable outcomes.

This plan has several excellent features:

1. It would bring all places to the same tax rate for the minimal school facilities; that is, the facilities that could be provided by an expenditure of $70 per weighted pupil. This tax rate would be 36.4 cents per $100 of full valuation of the real estate. The remainder of the $70 per weighted pupil would come from the state.

2. It provides a definite statement in objective terms of what should constitute the equality of educational opportunity that is to be offered; namely, the opportunity that an expenditure of $70 per weighted pupil will purchase. This standard is not a theoretical one, since it is determined by the actual expenditures that are now being made in places of approximately the state-wide average valuation of real estate per pupil.

The introduction of the idea of the weighted pupil is a means of recognizing one difficulty that sparesly settled communities have to meet in providing schools. This feature is taken from a study by Dr. Paul R. Mort, *The Measurements of Educational Need.*[7] Dr. Mort found in this study that the per-capita cost of providing equality of elementary-school offerings in schools of more than 142 pupils was practically constant. In smaller places it was greater and hence a factor is introduced to correct this difference. In one-teacher schools, regardless of the number of pupils attending them, the cost was found to be as great, on the average, as the expenditure made for 27.46 pupils in villages or city schools of more than 142 pupils. A minimum allowance, therefore, of 27.46 weighted pupils is made for each one-teacher school. There can be no question that the plan would make for equalization of the educational tax up to the point established for the minimal school facilities.

The authors of this plan state that its only objective is the equalization of educational opportunity, and all other educational considerations are subordinated to this one. In this lie certain weaknesses:

1. It is impracticable and would be undesirable, if practicable, to secure complete equality of educational opportunity. As the

[7]New York, Teachers College, Columbia University, 1924. 84 pp. (Teachers College, Columbia University, Contributions to Education, No. 150)

authors of this plan suggest, each school district would be free to make expenditures on its own initiative beyond the suggested minimal standard. The result is that while the stated objective is equality of educational opportunity, it would not be obtained under the proposed plan. Already a large proportion of the pupils of New York State have a richer educational offering available to them than could be provided by the $70 weighted pupil.

2. In going beyond the minimal standards the places of greatest average wealth per weighted pupil would have a distinct advantage over those of small average per-capita wealth. As previously stated, it was found in the Rural School Survey of New York State that the wealth per teacher in cities was on the average 75 percent greater than in rural schools. While there are some rural districts of great wealth, per teacher as a group they would be handicapped if the proposed plan were adopted.

It must be evident that, if the statements quoted from the National Bureau of Economic Research are fair statements of the economic status of the rural population of this country, rural communities would, on the whole, be at a disadvantage in providing school facilities beyond the minimal standards.

Progress in educational affairs has its basis largely in experience, and it would be extremely unfortunate to impose on a state system of schools a method of distributing state aid by which any large group of schools such as the rural schools, would be placed at a disadvantage in manifesting progressive tendencies beyond the minimum provided for under equality of educational opportunity. Especially is this true since the transfer of progress-factors from city to rural schools takes place very slowly and apparently only to a limited degree. The plan proposed for New York schools in making provision for uniformity ignores the fact that variation is the basis of progress and is an especially important one in a relatively decentralized administrative organization such as seems likely to obtain under conditions in this country.

3. Closely related to the preceding weakness, is the rejection, under the proposed plan, of the recognition of effort when local

school units make provision for educational offerings that are better than those provided by the minimal school facilities. The recognition of effort is rejected because it tends to "destroy equalization." While equalization may well be an important purpose in the distribution of state aid, the failure to recognize that beyond a certain point it is less important than the recognition of effort is to overlook a fundamental characteristic of the method by which a democratic society arrives at its conception of what its educational offering shall be. School patrons and taxpayers have to grow into a knowledge of what constitutes good educational facilities. The methods of financing schools that are set up should be conducive to growth. No matter how mechanically perfect a plan of state aid may be in providing for equalization of tax rates, if it fails to recognize the growth conception of education, it is certain, in the long run, to be a barrier to educational progress. Such a plan may bring temporary expansion in certain parts of the school system, but it is not conducive to permanent growth.

Those who would make equalization of educational opportunity the only purpose of state aid, at the expense of recognition of effort, fail to realize that, under the system of decentralized administration of education which prevails in the United States, educational progress is largely conditioned by the maintenance of an attitude of local initiative and responsibility toward schools. This attitude is certain to be much more highly developed under a method of distribution of aid that rewards effort than will be possible when equalization is the only objective sought.

It is, therefore, important if we are to maintain an educational system responsive to the demands of a democratic society, that the largest possible provision consistent with our economic status be made for growth through the recognition of effort. The relation of the educational system and of society in a democracy should be such as will make for mutual growth. As long as human nature is constituted as it is, it will be much easier to maintain this relation through the recognition of effort than to hold it through any plan of equalization of tax burdens that ignores it, no matter how mechanically perfect that plan may be.

In summary it may be said that the argument is not against equality of educational opportunity but rather that this is not the only end to be sought in the distribution of state aid. While there is not complete harmony of interest between equality of educational offering and recognition of effort, it is much better in a democracy to secure and maintain an attitude of growth toward education than it is completely to sacrifice this attitude for equality of educational offering.

Closely related to the importance of recognizing, in the distribution of state aid, the need for developing and preserving local initiative and responsibility in school matters is the need for shaping administrative organization and policy so as to secure the maximum of benefit from these qualities. There is a danger in the urge for efficiency through the development of large local units of school control, and the demand for the centralization of power in state educational control, that we shall lose much that has been of material assistance in carrying us to our present stage of educational development.

Much has been said in deprecation of the district system of school administration. Yet it is doubtful if a more effective type of school control could have been devised for pioneer conditions, conditions under which the demands on institutions for formal education are meager and where there are but slight variations in the ability of communities to provide schools. The district as it originated in Massachusetts was especially well devised for the maintenance under pioneer conditions of intimate relationships between social needs and educational progress. If this were not true it seems unlikely that it would have received the general acceptance that it has had in our educational development.

The weakness of the district system lies not in the lack of adaptation to the conditions under which it had its origin, but in its persistence long after we had passed from pioneer conditions of social and economic needs. It has outlived the period in which the demands for education can be met by a reading school. This is what the district school was originally.

We are now in a period in which civilization has reached such a degree of complexity that secondary-school offerings must be

readily available to all youth. Manifestly, the district as originally organized in most states is too small a unit for this purpose. We should come to a unit for local school administration that is sufficiently large to make provision within its boundaries for the educational needs of the majority of young people. With the present-day conception of educational needs this means that all young people should be placed in a local unit of such character that high-school opportunities are available within its boundaries.

These units should be formed in such manner as to make for the largest possible degree of harmony between school and general community interests—such interests as are represented by the economic and social demands of rural life. This will mean that political boundaries, which are for the most part artificial, will be recognized only to the extent that they coincide with the boundaries based on economic and social aspects of country life. This organization it is believed will give an opportunity for the largest possible utilization of community interests in the development of initiative and responsibility in school affairs.

This plan may be objected to on the ground that it is too revolutionary, as people have become accustomed to thinking in terms of the existing political condition. In reply it may be stated that it is not necessary to bring about such a change in its entirety at one time. Let us begin on the basis of the formation of local units of school control, retaining such political units as may now be used. When, however, it is found that the most effective harmonizing of community life and educational organization can be secured by cutting across political boundaries, let us not hesitate to do so. If this were done, freely, and after a careful study on the most scientific bases practicable, it would not mean more than a generation before our local-school units for a large share of the country would be materially modified.

It is difficult to see how the adoption of a policy of this kind could fail to contribute to the growth of an educational consciousness on the part of school patrons, that would in the last analysis carry us much further educationally than any plan in which there is a failure to recognize the importance of the

method by which a democratic society comes to its conception of education, namely, by growth.

Most rural communities need to be educated to a much broader conception of the place of the school in modern life. They still cling to the traditions of past generations. In the country as a whole, rural folk have not learned to appreciate the importance of scientific leadership in school affairs. The rural-school superintendents are, both in election to office and in retention of the office, too largely the creatures of political conditions. In spite of this fact many of them attain high levels of leadership. They do it not because of conditions but in spite of them. The office should have a tenure and a financial reward consonant with its responsibilities. It should be on such a basis in these respects that capable men and women will see in it an opportunity for constructive educational service.

These changes in the status of the office of county superintendent should come, but it is fully as important that provision should be made for such bases of financial support and such administrative organization as shall make for the most effective leadership of rural people in school matters. In this way alone can country people grow to the conception of education that is essential to the progressive development of democracy.

SOME CONCRETE PROBLEMS IN FINANCING RURAL SCHOOLS

D. H. Sellers
County Superintendent, Troy

The object of this discussion is to state briefly the financial problems which confront a certain Ohio County, with the sole purpose in mind of making concrete some of the principles presented in Dr. Works' paper. No claim of novelty or originality is made for anything in this paper. Miami County has been selected for two reasons: (1) it is the county with whose finances the speaker is most closely acquainted, and (2) it is a typical Ohio county.

One is justified in calling it a typical county. It has cities but

they are not large. In school affairs it has all types of schools—one-room, two-room, small consolidated, large consolidated, village, and city schools. Its population is almost wholly free from any foreign element and is fairly homogeneous; its average wealth per school child is very nearly the average for the state; and it ranks near the middle in expenditures per child for school purposes.

General Facts

The total number of pupils in the county-school district is approximately sixty-six hundred. The total tax duplicate is approximately $50,000,000, thus furnishing an average of about $7,500 per child at the maximum current-expense levy of 5.65 mills under the ten-mill limit, without vote of the people. This would produce only $37.37 per child; or, with the full mill added for tuition purposes between the ten- and fifteen-mill limits, $44.87 per child. Of course, it is seldom possible to secure these maximum levies. It is evident that it would be impossible to furnish anything like adequate school facilities without the extra mills by vote of the people. Every district in the county except two have extra levies in force now, and the two are proceeding under H. B. No. 27 to place three-mill levies on by petition. The median school tax rate in the county is 10.35 mills. With the three-mill extra levy on, all our districts can operate with fair efficiency except two or possibly three.

The first of these districts could operate on a meager basis and pay off its building bonds, were it not for the fact that prior to the application of the funding law (H. B. 599) in 1923, it had accumulated so large a debt for current operating expenses that it requires more than a mill to carry the yearly load of these bonds alone. This district requires some state aid.

The second of these districts is our biggest problem. Although having the largest duplicate of any county school, $4,460,000; it has so large a school population, that the wealth per school child is only $6,600, the next to the lowest in the county. The lowest is a village district with but little transportation, while the

district in question requires eighteen trucks for the transportation of its pupils.

Like the first district above, this one has a large amount of bonds which must be paid for out of the current expense levy. Furthermore, heavy road-improvement levies must come within the ten-mill levy with the result that even with the extra three mills voted by the people last fall, the current-operating levy is only 6.02 mills. This district is, therefore, not eligible to receive state aid. Action is being taken under the law (H. B. 27) to place a further three-mill levy on for this year. The success of this action is doubtful. But even with this the total operating levy will be only 9.02 mills, and some state aid may be necessary to finish the year.

What makes the future for this district still less promising is the fact that only the interest is being paid on the building debt. The first bonds do not become due until 1928. The only salvation for the district under the present laws seems to be to vote the bonds and interest levies outside all limitations. Most of you will agree that this is not a probability in many rural districts at present.

This district has a large new school building. The casual observer of its financial difficulties jumps to the conclusion that the big building is the cause of the trouble. A careful study of the situation hardly justifies this hasty conclusion. This building is capable of accommodating over seven hundred elementary- and high-school pupils. The writer knows of a building accommodating only about one-third as many pupils which cost 76 percent as much. In an adjoining school district a building is crowded with about three hundred pupils, less than half as many pupils, which cost 64 percent as much.

The real secret of the matter lies in the consideration of the tax duplicate back of each child. We have already stated that the district in question has only $6,600 per child. The adjoining district referred to has about $10,500 per child. With the three-mill levy, the latter has no trouble financing its schools.

Causes for Increased Costs

What have been the causes of our current financial difficulties? We may answer this question briefly, by saying that these difficulties are due to the tax limitations, coupled with a virtually fixed duplicate. The limitations unfortunately went into effect just before the rising cost of operation became unavoidable, becauses of several causes. The chief causes of increased costs are: (1) increase in enrollment, due to the Bing Law and the growing interest in high-school work; (2) enlargement and improvement of school plants and equipment; and (3) general rise of the cost of living.

Increased attendance.—The elementary attendance, as reported in the First Annual Report of Miami County, 1915, was 4,252; the high-school attendance was 562. The report for last year showed 5,429 elementary pupils, while about twelve hundred pupils were in high school. Thus the increase in elementary-school enrollment was 28 percent, while in high school it was 113 percent. Of course, a 113-percent increase in high-school enrollment means a much greater increase in cost than a similar increase in elementary enrollment.

New buildings.—In 1915 there were no centralized buildings in the country. The one new building was in a village. Since then nine centralized buildings have been erected and two in villages. Of the school taxes paid $139,836, or 22 percent, go for bonds and interest largely on new buildings. But the cost of the buildings is not the only item to be charged against centralization. Ten years ago there was no transportation. Today 2,439 children are transported at an annual cost of about $50,000.

Rise in cost of living.—In addition to the increased costs of school operation already enumerated, the schools, along with all other institutions, have had to meet the burden of the general increase in the cost of living. They have had to meet this rise in costs with no corresponding increase in the tax duplicate from which the revenues are raised, and with the tax-rate limitation law which has constantly forced boards of education to resort to borrowing not only in order to construct buildings and equip

them, but even to meet running expenses. The outcome has been inevitable—a large indebtedness, and financial difficulties—resulting in a lowering of efficiency in many instances.

What shall we suggest as to the immediate outlook? I have stated above that all but two of our seventeen districts will be able to operate with fair efficiency with the extra three-mill levy on. I want to emphasize that it is only fair efficiency in most of our schools, while in some the efficiency scarcely is fair. In short, to finance the schools as they should be financed to meet the constantly increasing demands will require more money than it seems possible to raise under existing conditions. How shall additional funds be secured?

Possible Solutions

There are two general answers to the question: one is to increase the duplicate or remove all tax limitation—in short, to get the money from a property tax as is the present current custom; the other is to make use of some form of taxation other than that used at present. Personally I favor the use of some method which will be based more nearly on ability to pay than the present; but it is merely my intention to suggest points without any extended discussion.

Another principle that should be adopted is that of the responsibility of the state to assume an equitable portion of the burden of school support. At present the state is failing to perform its duty under our State Constitution, which requires it to maintain a state system of schools.

As I struggled with the financial difficulties of our county last year the constant complaint I met among board members was not that the schools were costing so much; but that the state was continually placing new obligations upon boards of education without providing adequate means for financing them. A larger state support of the schools, on a basis other than charity, as at present, is one of the outstanding needs of the hour. It will not only help to secure the money for the schools; but it will distribute the tax burden more equitably over the state.

Likewise, there should be an equalizing of the school burden

in the county just as there is of the road-building burden. The County Board of Education should be empowered to levy and distribute a certain portion of the taxes, as an equalizing measure within the county. Combined local, county, and state support of the schools is the only satisfactory method of financing them.

Any complete discussion of our financial difficulties necessarily involves a reference to the psychological element or the attitude of mind of the school patron. Many persons during the past months have said to me that the trouble with the situation was "high taxes" as though this were the ultimate cause of the discontent. The fact of the case is that following the slump of 1920-21 a shortage of money with which to pay taxes was the real cause of the reaction of the past four years.

Having less money to spend, the average citizen began to look around for a safety valve to relieve the financial pressure which was rendering the situation dangerous. He didn't want to give up the fine furniture, the power machinery, or the automobile, which he had bought when money was plentiful. His eye fell upon the new school buildings—authorized by a vote of the people in every case; he was told teachers were being paid exorbitant salaries—he had forgotten three-dollar wheat and didn't know much about the cost-of-living index. Some demagogue looking for votes began to whisper about the extravagance of school boards and the high-school taxes. The safety valve had been found. He did not do without any of his personal conveniences, sell his automobile, and go back to earlier conditions in farm life; but instead he allowed himself to be worked up about waste in school finances until he really believed that his best neighbor whom he had helped to elect to the thankless job of membership on the school board was actually crooked. When the school board and the superintendent told the people that it was impossible to run the schools without more money he believed the demagogue and voted "No" in capital letters.

He complained at home, at the county store, at public sales, even at church, about high taxes. Now if high taxes, as such, are the cause of the trouble, how can the following observation be explained. The speaker has worked in three counties since 1920.

He can deliberately state and if necessary verify it, that in each county the district with the highest school-tax rate has manifested the least unrest during these troublous times; while, on the other side, the districts where most disturbance has occurred have almost without exception fallen below the median rate in school taxes and have often been in the lowest quartile.

Furthermore, the average tax rate in Miami County in 1923 was three or four mills lower than in another county where I had worked the year before, and not above the state average; yet seven out of eight districts voting on the three-mill levy voted "No." In 1924, with no new facts before them, the people in eleven out of twelve districts voted "Yes."

What is the conclusion then? To my mind it is, that the psychological element has entered largely into our troubles of the past few years. In our case the people in 1923 allowed themselves to follow false leadership and believed that there had been gross mismanagement of school finances. Admitting that there may have been some minor errors as in all human affairs, but standing on the assertion that there had been less extravagance in school affairs than in the ordinary American home, the *rural* home even, we invited a study of facts. The people's attitude changed—not merely their knowledge, for we gave them the same facts in 1923—but their attitude changed and today we have virtually none of the rabid dissatisfaction of twelve months ago.

PUBLICITY AS AN AID IN FINANCING AND ADMINISTERING COUNTY-SCHOOL SYSTEMS

O. E. Pore

County Superintendent of Schools, Ravenna

The educator belongs to a select and refined group and must not make his work common by vulgar methods of attracting attention. Too many school heads are interested in publicity, only when their own names appear in the headlines. Every school advertisement should pass the acid test of honesty. The Portage County schools have a program of publicity which we believe

conforms to the principles of honesty, unselfishness, and dignity. This paper will discuss that program under five heads.

1. *The printed word.*—Our schools issue an annual every June which summarizes in picture and story the leading activities of the year. A copy of this publication goes into the hands of practically every one of our school patrons. We are convinced that this yearbook develops county consciousness, stimulates both teacher and pupil to do their best, and constitutes a tangible product by which the public may estimate the efficiency of its schools.

Our current publicity is under the management of another committee which each week produces a page of school news. This is then syndicated to seven papers, the combined circulation of which reaches practically every resident of the county. Each school has its own news representative to whom a return post card is sent every Monday. These reporters write up the special doings in their respective districts and mail their cards back to the central office each Friday. Some member of the editorial board then accepts what he considers suitable for the press. From time to time, special articles are assigned to different members of the committee so that the major activities of the county-wide program are assured space and emphasis in keeping with their importance. Pithy paragraphs from educational journals and apt sayings from prominent statesmen are frequently quoted when they are especially applicable to local problems or help the cause of education in general.

2. *The spoken word.*—In this day of consolidated school centers, the county superintendent may well give enough attention to community calendars to guarantee patrons in every district a balanced ration of winter entertainments. Lecture Courses, Patrons' Days, Parent-Teacher Meetings, Grange Programs, Farmers' Institutes, and Commencements are ideal occasions for presenting to the public the cause of the school. It is not necessary or desirable that speakers should discuss the merits of any particular school system; but rather the general proposition of "Preparing Youth for Citizenship." Such a subject is certain to bring out the need of adequate finances, the duty of parental cooperation, and the accepted standards of modern educators.

The aggregate result of such a systematic and purposeful speaking program is a friendly atmosphere which makes the perplexing problems of administration easier. A few years ago, our county board issued a bulletin announcing a list of approved free speakers available for such meetings. Among the number were professors from five colleges, the president of the board of trustees from a large university, an official in the United States Bureau of Education, a probate judge, a prosecuting attorney, a Y. M. C. A. secretary, and many other prominent professional men.

Our spring track-and-field day draws the largest attendance of the year. We take advantage of the crowd's enthusiasm for the physical and force it to consider some phases of the mental and moral. Just before the afternoon sports begin we have an educational address of one hour by some national figure. Senator S. D. Fess, Commissioner J. J. Tigert, and Superintendent William McAndrew have appeared on our programs. Senator F. B. Willis is to be the orator this year. We believe that the inspiring messages of these great leaders make our school-improvement campaigns somewhat less difficult.

3. Spectacular events.—The average basket-ball tournament tells the public more about a country's standards of sportsmanship than a dozen boastful front-page articles. Literary and musical contests can be made good enough to satisfy the lovers of intellectual gymnastics that scholastic and artistic training is receiving adequate attention. Public exhibits from shop and classroom show at a glance whether the job of instruction has been thoroughly done. Those responsible for the administration of the Portage County schools believe that these special occasions give the people the necessary opportunities to evaluate pupil achievements with a minimum expenditure of effort.

4. The appeal of pictures.—A pictorial advertisement possesses strong inherent interest value. It makes at a glance the points that would otherwise require pages of argument. It is a short cut to mass education. Boss Tweed of New York is said to have declared that he cared nothing about newspaper criticisms of him, but he shrank from having the people see cartoons caricaturing

his ugly deeds. He felt that they could understand the pictures even if they could not read editorials. It is generally conceded that Nast's pictures put this political boss out of business. Illustrative lantern slides are especially valuable publicity in promoting campaigns for centralized schools.

5. *School visitation.*—Patrons get a more accurate and usually a more favorable impression of the school if they drop in occasionally and see the children at work. Forming an opinion of a teacher from a spoiled boy's report is about as reasonable as buying a set of false teeth from a mail-order catalogue. To encourage parents in making first-hand investigation of their educational system in action, one week is set aside each term for an "open house" to the public. One day each year the county board and all the local boards make a tour of about one-third of the buildings. Each principal is asked to be prepared to put on his best act. Before the day is over the visitors have observed manual arts, domestic science, physical training, writing, drawing, and music, at their best. They have had free lunch in a school cafeteria and have looked in as the honored guests at the high-school championship football game.

A publicity program first shows its effect on the school itself. When the family expect company the house is set in order. The teacher will work just a little harder if she knows her product is going to be matched against that of her co-workers in other districts. The principal finds that it is easier to get busy than to explain why he failed to make as good a showing as his neighbor. The superintendent is going to make certain that his program "will pass muster," when he understands that his record is to be an open book where all may read. These things make for a better school system. Moreover, it inspires the public with confidence. The parent feels that he has a share in the school. He becomes conversant with its problems and senses its needs. When once his interest is thoroughly aroused the difficulty of financing disappears, for the people in a democracy always find a way of doing the thing they want done.

EDUCATIONAL AND INTELLIGENCE TESTS

C. H. Lake, *Assistant Superintendent of Schools, Cleveland, Presiding*

THE LIMITATIONS AND DANGERS OF ABILITY GROUPING

C. W. Washburne
Superintendent of Schools, Winnetka, Illinois

There are two types of opposition to ability grouping. There are those who oppose ability grouping because it goes too far and there are those who oppose it because it does not go far enough. I can tell you that my opposition to ability grouping is because it does not go far enough. As a matter of choice between ability grouping and the old-fashioned traditional class method, ability grouping is an excellent thing. It is a step forward in education; but as a choice between the thing that we should have and the thing that we do have, ability grouping is a mediocre makeshift. It is not a necessary makeshift, it is a necessary timorous step on the way toward making the schools fit the children. People have a way of thinking it is saner to move a little at a time than to take too big a job on their hands. They seem to feel that there is something more humane about it.

A certain amount of unnecessary injustice is done to children when you try to teach them by half-way measures. The whole theory of ability grouping assumes that it is possible to classify children into divisions, usually three. The most common classification is made by intelligence tests, and the most theoretical is made by careful balancing of intelligence tests, achievement tests, and teachers' judgments.

Let us take the basic scheme of classification, the scheme which has to do with intelligence tests. Almost every scheme of classifying children by ability grouping assumes an intelligence test as the modifier. Think for a moment of an intelligence test, what it looks like, how it was composed, and how it was first made. Re-

member that Binet in his primary work of planning an intelligence test simply tried all sorts of stunts on children of various ages. He tried one thing after another until he discovered certain things most children could do. His tests were drawn more or less out of the air, out of his own mind. There have been many revisions and modifications of the original tests but no one even pretends that an intelligence test at the present time is in any sense a complete inventory of a child's mental capacity. No one pretends that it is a diagnostic inventory of the child's ability.

All that we can claim for the intelligence test is that it gives us samples of a few of the most prominent mental functions which seem to correlate rather well with school ability. It gives us a general average by which we can roughly classify one child as bright and another child as slow. It gives some further indication of the approximate rate of growth of that particular part of our mental function which has to do with success in school subjects. That is about as far as we can go in discussing what an intelligence test does.

Let us take two children, both of them exactly ten years old, both of them having exactly the same intelligence quotients. Let us give them both the same test in different subjects. Let us say that on one test one of the children makes the same score as the average eight-year-old child, while the other makes the score of a twelve-year-old. We can expect to find a four-year gap between mental ability to repeat digits and the ability to solve the ball and field tests but only in opposite directions. When we are figuring that child's mental age we find that he has a mental age of ten. Since their chronological age is ten and both have intelligence quotients of 100, they are exactly alike. They are equal but just as different as they can be. Yet our intelligence test gave them exactly the same intelligence age and quotient. Of course we should not determine this on one test but on a battery of tests.

Many of you have given psychological tests to hundreds of children. You know that one child goes way up in one group of functions while another may have a new ability grouping on the basis of mental age. Any ability grouping on the basis of mental age or intelligence quotient ignores those fundamental differences.

An attempt to classify children by ability grouping also assumes that academic achievement is proportionate to mental development, that is, to general intelligence. Our statistics seem to indicate that is generally true. The coefficient of correlation between intelligence quotient and rate of school progress is in the neighborhood of .5, a good positive correlation. But let us not be fooled by relatively vague coefficients when it is really both the intelligence quotient and academic achievement. But many individuals do not come into that category at all. Many individuals have opposite reactions. There are many, many exceptions. A child with an intelligence quotient around 60 is going to move forward in his academic school subjects more slowly than a child with an intelligence quotient of 30.

The moment you try to classify children you find that you put all sorts of exceptions into your rule. You put children into a group who do not belong there. The ability grouping also assumes that a child who is good in one subject is likely to be good in another. Again statistics come to the rescue and say that this is true. The correlations between ability in reading and ability in arithmetic is .6, a positive correlation. But there are many exceptions, so many, that simply to make a blanket rule that children who are good in one subject are going to be good in another subject is to ignore the individual children. Let me give you an analogy. Let us take the question of clothes. Suppose that all clothes are made in three sizes, regardless of individual differences of height and weight. Undoubtedly we would be better off than if all clothes were made of one size. My clothes would fit me better if they were made for a man five feet ten than if all suits were made in one size. The four inches difference, however, would be enough to make my clothes fit me very badly indeed. The same thing would be true of each size and type. We would not think of entering a store where clothes were sold cheaply, because they only had three sizes, when we could go to another store and purchase any size we wished at a higher cost. Is it more important to have our clothes fit us well than to have our schools fit the children? Is our clothing more important than our education?

I know two little girls in my own schools. They both have the same intelligence quotients, 140. One of those little girls is not particularly interested in school work. She gets by and that is all. Her ability in academic subjects is about average. Theoretically it should be very much above average. But in arithmetic she is very poor. I remember one time she said to me, "I want to be a teacher when I grow up. I want to teach the third and fourth grades." When asked why she wanted to teach these particular grades, she answered, "Because they don't have any decimals and fractions." Now that little girl with her high intelligence quotient has certain other characteristics which make up for her lack of enthusiasm in arithmetic. She has a great deal of poise, and is quite grown-up in her manner. She has a little kindergarten that she organized herself. She interviewed the parents and asked them to let her have their children on Saturday mornings. She interviewed people that had kindergartens, bought lumber, and fixed up her attic. She showed a great deal of organizing ability, and her kindergarten was so successful that she had to employ an assistant.

That little girl's sister with the same intelligence quotient, same environment, same heredity, is not particularly responsible about children. She hasn't any particular organizing ability, but loves mathematics. She is now seven years old and in the fourth grade. She likes arithmetic so well that when she was studying addition she used to go home at night and take books out of the bookcase and add up the table of contents to give her practice in addition. She literally devours school work.

Now a scheme of ability grouping would say that these two children are the same because their intelligence quotients are equal. But they aren't. The one child needs the most careful painstaking treatment in arithmetic, while the other child gets things like a flash. The one child enjoys drawing graphs of the Smiths, Johnsons, and Browns in the telephone directories. She has keen ability in that particular field. She hasn't her sister's ability in meeting people, working with people, planning and organizing things. These are two instances which I happen to know well. You can probably find similar ones in your own

school. Children are different. Any attempt to classify them into different groups is going to do serious harm. We have statistical evidence from two school systems where ability groupings have been tried and measured. In these systems, Detroit and Los Angeles, attempts have been made to determine whether ability groupings do handle children justly.

The methods of ability grouping, used in Detroit, were carefully worked out by Courtis. He took the children whose ability had been measured, and he gave them the chance to work as individuals. Careful records were kept of the work of these children and the progress of the groups was compared. The children in the slowest group when allowed to work as individuals made greater progress than the fastest group, which was instructed as a group. There was not a single exception to this rule. The range of work done by children within any one group was always much greater than the difference between one extreme of that group and the corresponding extreme of another group. The amount of work done by the children in the slow group may be represented by figure 1, the middle group by 2, and the bright group by 3. Within that first group, where the children are allowed to progress as individuals, the difference is often several times 2, perhaps 7 or 8. A much greater range is found within that group than within the top and bottom group.

In Los Angeles a similar investigation was carried on. A series of different measures was made. All sorts of different angles were studied. They found, of course, that in every respect, the average child of the fast group did better work than the average child of the middle group, and the average child of the middle group did better work than the average child of the slow group. This shows overlapping. The same thing is observed when taking the records of individuals. A careful reproduction was made of the children's progress in the elementary schools of Teachers College. A wise teacher, who is able to predict the exact rate of progress of each child for each subject does not exist, for one finds that there are children who have been held back to finish a certain unit of work in thirty days who could have finished the same work in four days. The same is true of the child who was forced to finish a unit of work in thirty days who should have taken forty-eight.

In the Winnetka public schools under a scheme of individualized instruction, the children are allowed to progress at their own rates in the academic subjects. The average child in the top quarter of intelligence, when we take the records and look at them, makes a progress from about a grade a year to one and one-eighth grades a year. An average child in the middle group makes a progress of about a grade a year. A child in the bottom quarter of intelligence makes a progress of about nine-tenths of a grade a year. The range of progress in that first group is from eight-tenths of a grade a year to two grades a year. The range in the middle group is from about seven-tenths of a grade a year to two grades a year. The range in the slow group is from less than a grade a year to one and one-half grades a year. The scale of difference is much greater among the groups themselves.

It is not democratic, and it is not fair to put children in ability groups and to tell them that they have to go at the rate of the group. You have to recognize that each child is an individual and that he progresses at a different rate of speed in different subjects at different times. There are all sorts of other factors beside intelligence and achievement quotients. Dozens and dozens of factors are always entering into the child's progress. It is our job to fit our schools to the children. It isn't necessary to cut off the dog's tail one inch at a time.

THE RESULTS OF ENTRANCE EXAMINATIONS TO TEACHER-TRAINING SCHOOLS

W. B. Bliss
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The Ohio Law requires all candidates for admission to teacher-training schools to take an entrance examination. On May 10, 1924, a uniform examination, consisting of standard tests in general ability, English, and reading, was given at each county seat. Examiners from the five state-supported institutions conducted this test. More than forty-four hundred individuals presented themselves at the eighty-eight centers on this date. A program of entrance tests was also administered during the fall of the preceding year at the various institutions.

The conclusions drawn from this two-year program are:

1. In mental ability the group desiring to prepare for elementary teaching is substantially on a level with high-school senior classes; that is to say, they are not the cream of high-school graduates nor are they the dregs. They are both cream and dregs in the same proportion as in high-school senior groups.
2. In reading, the median attainment a year ago corresponded to the eleventh-grade standard. This year the achievement was slightly under the tenth-grade median.
3. In grammar, the median score of those tested was on a tenth-grade level.
4. In sentence structure, the level of performance was about equal to the median of eleventh-graders.

Standards were set with reference to grade norms and to the 10-percentiles on the distributions for this particular group. The minimum satisfactory scores thus established were as follows:

	Ohio Norms
Ohio State University General Ability Test	72
Otis Self-Administering Test of Mental Ability, Form A	31
Otis Test, Form B	27
Van Wagenen Reading Scale—History	72
Pressey Sentence Structure Test	12
Pressey Grammar Test	12

A summary of the results is as follows:

Total number examined	4,495
Total number wishing to enter a teacher-training course	3,175
Total number of examinees passing	4,077
Total number failing	346
Total number granted probationary admission	72
Percent of failures	7.7
Percent of probationers	1.6

It is of interest to note the different levels of attainment in the several sections of the state. This comparison may be made because of the way in which the examination was arranged under the five state-supported institutions covering five distinct sections of the state. Table I presents median scores on each of the tests by geographical areas.

In every test the northeastern portion of Ohio shows marked superiority, while northwestern Ohio is uniformly second. South-

eastern Ohio is uniformly the lowest in median scores except in the case of reading where the central district is lowest and the southeastern section next lowest. Southwestern Ohio is on the whole slightly superior to central Ohio. It is not possible to offer any unequivocal explanation covering the facts shown in this table. One can easily point to the excellent schooling facilities offered for long years in the old Western Reserve territory and the meager opportunities that have been provided in the financially crippled hill counties of the southeastern part of the state. There is no doubt that the rather marked differences between these two

TABLE I

MEDIAN TEST SCORES SUMMARIZED BY GEOGRAPHICAL AREAS

	O.S.U. General Ability		Otis		Reading	Sent. Struct.	Grammar
	A	B	A	B			
Northeastern....	113.	114.2	47.8	43.6	85.2	19.3	22.3
Northwestern....	105.3	108.5	44.9	42.1	84.1	18.7	20.4
Central.....	104.	104.5	44.6	40.2	81.6	17.7	18.6
Southwestern....	103.9	105.6	45.2	40.7	82.	18.	19.1
Southeastern....	102.3	101.	42.6	38.6	81.8	17.3	18.
Entire State	105.8	107.8	44.9	41.2	82.9	18.1	19.7

sections is contributed to by this factor of divergent educational opportunities. It is not so easy to trace the biological influence, but it is altogether possible that this factor is a definite element. No matter how we explain it, one fact remains clear, that the imposition of a uniform standard does not eliminate as many in the northern section of the state as it does in the southeastern. Sympathy for the southeastern group, however, cannot lead us to set any lower standard than the one previously outlined. The question is should it be raised for northern Ohio.

It seems apparent from all the data gathered, as it does also from an empirical standpoint, that mere willingness to present one's self at the doors of a teacher-training institution does not constitute an adequate criterion. Ambition, a perfectly natural trait, prompts many pupils who lack the capacity to profit from a higher education to seek entrance to the professional school and

the college. The welfare of the state, however, requires that inefficient and incompetent persons should not be permitted to undertake the work of teaching. It is also poor economy to permit such persons to begin their training course only to discover after a probationary period that they are lacking in preparation. An entrance examination should bar, and cannot survive unless it does bar, many incompetents who could have been enrolled under the old plan requiring only high-school graduation. To say that the training school would find them out and eventually drop them is beside the point. The needless expenditure of effort and money involved in this mode of procedure should be forestalled in fairness not only to the institution and to the state but to the individual whose fortunes are thus affected.

DIAGNOSTIC TESTING IN ARITHMETIC

W. J. Osburn
Wisconsin State Department of Education

The fundamental theses set forth were:

1. It is wise to teach what the pupils do not know.
2. It is stupid to teach what the pupils already know.
3. Every child deserves a chance.
4. If a pupil is failing he, his teacher, and his parents are entitled to know why.

The testing movement has been a great help to the supervision of instruction. The motive for giving tests in the early days of the movement was to find out how any given class of pupils ranked in comparison with the standard given on the test. Many teachers found that their classes were not up to standard, and all teachers found that certain members of their classes were falling short of what might reasonably be expected of them. This gave rise to an insistent demand for some means of bringing the low pupils up to standard. If this were to be done it was necessary to study more carefully the causes which produce low scores on the standard test.

It was soon discovered that these causes might be at least partly discovered by a study of the nature of the errors which pupils

make both in their regular work and on standard tests. In other words, many of the standard tests proved to have diagnostic value. Studies of errors on the Woody Tests such as those carried on in Wisconsin and later in Michigan served to show that the pupils were failing on certain types of exercises rather than on others. Our information concerning the nature and cause of errors was much extended also by Counts' study based on the Cleveland Survey Tests. More recently, considerable information has been collected concerning errors in reading, problem-solving, spelling, and language. With these data on hand it is now possible to use standard tests in all of these subjects as diagnostic instruments. By noting the types of questions which are missed it is now possible for the intelligent teacher to provide practice material which is suited to the needs of the individual pupil.

One thing of great importance has grown out of these error studies. We can now say with certainty that every error has a cause. There are no chance errors. This has meant a great deal in supervision, and a great amount of supervisory activity is now devoted to the removal of causes of error. The following types of procedure are now being used:

1. The Buckingham Problem Test is used to show which pupils fail because they fail to read the problem correctly, which fail because of mistakes in the fundamentals, and which fail through ignorance of fundamental quantity relations.
2. The Thorndike-McCall Reading Test is used to show who fails to comprehend because of irrelevant elements and who fails because all of the elements are not taken into consideration.
3. The Gray Narrative Reading Scale is used to show who reads too slowly.
4. The Briggs English Form Test is used to show which of seven important errors is made by the individual pupil.
5. The Iowa Spelling Scale shows the nature of spelling errors and who makes them.

Numerous other tests may be used in this way, but there is not time to discuss them here. The remainder of this discussion will be devoted to another type of diagnosis. For publicity purposes it is sometimes called inventory testing. It differs from other tests

chiefly because it covers a total but narrow field. Standard tests are made up of samplings from many fields. When used for diagnostic purposes, they furnish data with reference to the samples contained in the tests. Inventory tests, on the other hand, furnish data concerning total fields. They are intensive rather than extensive. Probably the most widely used tests of this sort are those known as the Wisconsin Inventory Tests in Arithmetic. They cover simple addition, subtraction, and multiplication, column addition, addition in multiplication, and zero quotents in short division.

The Wisconsin Supervisory Tests in Primary Reading are inventory instruments for vocabulary in primary reading. The Thorndike *Word Book* may be used for inventory purposes. A more recent contribution to this field is the Pressey Tests of Technical Vocabulary. These tests give the special words which are needed in school subjects. There are several other fields in which inventory tests are needed and there is little doubt but that they will be forthcoming ere long. Their general purpose is to find out just how much of a total field a child knows, and how much he does not know. With information of this sort, teaching will become more interesting and intelligent and less wasteful and stupid.

A PRELIMINARY SURVEY OF FOUR PLATOON SCHOOLS AT CLEVELAND

Wm. L. Connor
Director of Reference and Research, Cleveland

The four platoon schools of Cleveland were paired with four elementary schools which were about equal in size, and in the judgment of competent observers about the same in character of population and educational achievement. Recognition was taken of the fact that tests ordinarily do not measure certain moral, social, and spiritual values, which the schools should conserve.

Advantage has been taken of the fact that supervisory officers commonly believe that they recognize in the classroom the kind of pupil-activity which contributes most to these moral, social,

and spiritual values. A fairly adequate statistical device—a scheme for rating teaching upon the activity of the pupil—was set up for estimating pupil-activities upon which these values are based.

After preliminary testing, rigorous statistical procedure was used in noting the differences between the various schools, and in spite of inequalities it is hoped through this and subsequent testing to get an answer to the question, "Which is the best educational instrument, a traditional elementary school or a platoon school with the same grades?"

As a by-product of the preliminary testing and rating of teaching, there has been an increased demand for supervision and the further demand for testing and rating of teaching.

ELEMENTARY TEACHERS

EMMA J. COOKE, *Spring Street School, Columbus,* Presiding

CORRECTIVE ARITHMETIC

W. J. OSBURN
Wisconsin State Department of Education

The fundamental theses of this discussion were:

1. Children differ enormously in arithmetical ability.
2. It is futile to try to teach what the pupils cannot learn even with the best of teachers.
3. It is wise to teach what the pupils do not know.
4. It is stupid to teach what the pupils know already.
5. The amount of drill should be suited to the difficulty and social importance of the material to be learned.
6. Every child deserves a chance.
7. If a pupil is failing he, his teacher, and his parents are entitled to know why.

An ideal course of study in arithmetic may be likened to a stairway. In such a stairway the steps are of equal height. In a graded school each step is of such height that the average child can make one step at a time with reasonable ease. But average children constitute only one-half of the entire student body. Twenty-five percent are above the average. These pupils can go up the stairway two, three, or even more steps at a time. On the other hand, twenty-five percent are below the average. None of these pupils can make even one step at a time. For them additional and lower steps must be inserted.

Our methods of teaching have come down to us from a time when pupils who were below the average did not attend school in any great number. Now we have compulsory-education laws which compel all children to attend school. This indicates a beautiful faith in the value of an education. The general public thinks so well of us as teachers that it says through its laws that all children must come under our influence. This is a splendid compliment and also a tremendous responsibility, but we must

meet it. Failure is unthinkable. The burning question with all of us is, "How can it be done?" "How can each of you go home and do something worth while for that slow pupil who sits at the foot of your classes day after day in hopeless bewilderment?"

Corrective arithmetic affords the best-known solution to the problem so far as arithmetic is concerned. Its purpose is to supply the missing steps in the stairway over which the child must pass. We must not continue teaching slow pupils with a course of study which was originally intended for the gifted alone. Take the number combinations, for example. I dare say that every person in this audience was taught only the forty-five principal combinations in each of the four processes, and we have learned these combinations so well that every one knows them when they are presented singly. But how is it when they occur in columns for addition or in a long-division problem, are we all sure of ourselves then? I fear not. The fact of the matter is that our teachers taught us only about one-seventh of the total number of combinations which we are called upon to use. They taught us $6 + 7$ but not $16 + 7$ or $0 + 6$. They taught us 13 less 8 but not 53 less 48 which occurs when you solve the exercise $8\overline{)536}$. They taught us $8 + 3$ but not $63 + 8$ which occurs in the exercise 79×9. They taught us one combination out of seven and we had to learn the other six for ourselves. Some of us did not do the job very well and that is why we make errors now. The stairway of learning contains some 1,237 steps, and we were and are compelled to mount at the rate of six or seven steps at a time—and most of us can do it although some of us stumble quite embarrassingly. How did we learn the six or seven steps which our teachers did not teach us? We did it through the transfer of training. We saw the identical elements in 1 and 8, 11 and 8, 21 and 8; in 11 less 8, 21 less 18, and 51 less 48. But this is just the thing which the slow pupil cannot do. He is not conscious of the identical elements which exist in what he has to learn. For him the only hope is to learn each element separately.

In dealing with human material we never find definite demarcation. The slow pupil is not set off from the average by any

marked boundary. Hence there are many children who see some identities in combinations but cannot see others. From this it follows—and this is a point of great importance—that we shall seldom, if ever, have to teach all of the 1,237 combinations to any one child. Almost every child can transfer his training at least part of the time. The transfers occur at different places on the stairway for different pupils. If, therefore, any of you have, say, forty slow pupils you will have to test the class on all of the 1,237 combinations before you can locate all of the difficulties of all of the pupils. This leads us into the subject of inventory testing which I propose to discuss at another time. Here it will be sufficient to say that inventory and diagnostic testing is a part of corrective arithmetic and to state that the testing technique is now fairly well worked out.

The method of attack already described with reference to the number combinations is also applicable to other portions of arithmetic. Throughout the whole subject we expect a large amount of transfer. We never teach all of the facts about fractions, problem solving, or any of the applications of arithmetic, and this is as it should be because the ability to bridge gaps is an essential element in the ability to think.

ENGLISH

J. V. Denney, *Ohio State University,* Presiding

PREPARATION FOR TEACHING ENGLISH

Clarence Stratton
Cleveland

It may be said that the first thing the candidate for the position as teacher of English should do is to be extremely careful in choosing his grandparents. If he overlooks this detail, he might insist upon being born of good Anglo-Saxon stock; yet there are a great many persons with non-Nordic names teaching English, just as there are a great many MacPhersons and MacIntoshes teaching French. It is not an infrequent thing for college professors to lament the fact that parents no longer take their children on their knee and read to them the good old books of our childhood days. With all these lacks of general training it is the more necessary that the candidate decide early that he will be a teacher of English, certainly not later than the end of his freshman year. The late choosers display the most serious lacks in preparation. These lacks are most apparent in the letters of application. It is easy to detect the specialist in German by the capitalization of every common noun. It is easy by other violations to determine that the preparation of the candidate has not been the best for the teaching of English.

In another connection I have listed the aims of the teaching of English in the high school as four. As preparation for teaching, these aims, I believe, are exactly the same: (1) to read, (2) to write, (3) to speak, (4) to think.

The preparing teacher must read and read widely. He must discriminate between what is going to be of value and what is of ephemeral interest only. Knowing the studies that have been made of the reading of teachers, one is amazed at how many books may be evaded. Secondly, the teacher must read knowingly. He must understand exactly what is in the books that he reads. If he has not met the great books such as *Don Quixote,*

Robinson Crusoe, Gulliver's Travels in boyhood, he must read them as soon as he determines to become a teacher of English. It is manifestly impossible to take all the courses in literature offered by a college or university. They range in number from twenty to forty. I should recommend: (1) a history of English literature as most important; though it may be preceded by (2) a shorter course in American literature; (3) a study of the technique of certain forms in the following order: (a) poetry, (b) drama, (c) novel, (d) essay, (e) short story; (4) courses in periods or individuals: (a) Elizabethan literature or Shakesperean drama, (b) nineteenth century, (c) romantic revival, (d) eighteenth century, (e) Chaucer, (f) Restoration, (g) contemporary, (h) Tennyson, (i) Browning.

The required course in rhetoric and composition for Freshmen is not sufficient. The person who prepares to teach mathematics will have had that much training. A teacher, unless adequately prepared in composition, wastes time and energy. He must master the forms of written discourse. He must not hesitate in his judgment of pupil writing. He should be able to reduce the drudgery of reading and marking pupil papers. The necessity for training in composition is seldom stressed sufficiently. Four years of persistent training and practice, perhaps with the emphasis on expository writing, would be advantageous.

The teacher of English should know how to speak. I should not recommend, as do some experts with whom I have conferred, phonetics, or oral interpretation of literature or elocution or oratory. Better than any or all of these is public speaking, with the emphasis upon exposition, preferably as a Junior or Senior, when the student is almost at his maturity. All the preceding courses should make the candidate an authoritative expert in English. The fourth aim, to think, should be served by every course in English, but to this specialized group there must be added courses in different though related subjects. Preference should be given to such courses as those dealing with the philosophy of various systems of teaching, those of method and of classroom management. Certainly there should be courses in the special methods of teaching English and others emphasizing the

mastery of the literature taught in high schools. In addition to this professional group, there should be a combination of broadening courses; history of art, sociology, economics, and science.

Anglo-Saxon and historical grammar seem to be of little value to the high-school teacher of English. This may be said of all those languages in which no reading is continued after graduation from college or university. The classics are valuable if literature in them is read as literature. Modern languages are better than Germanic philology. The chief value of all foreign-language study is not in the mastery of the language but in the results from the contact with literatures other than our own.

SUPERVISION IN ENGLISH TEACHING

C. R. Rounds
Director of English, Elizabeth, New Jersey

As a worker in the field of supervision, I have elected to discuss with you some of the practical problems of the supervisor; and since his most frequent contact is with the teachers in his jurisdiction, I have chosen to speak in terms of this relation. In dealing with this subject I shall draw on my own experience, and hence it may be well for me to outline the duties of my present position. My responsibility is for the English work in grades VII to XII of our city, whether taught in the junior and senior high schools or in the other public schools. One senior high school, two junior high schools, and six other public schools house the fifty teachers and approximately forty-five hundred pupils in my jurisdiction.

Speaking as a practical worker in the field, faced every day by specific and urgent problems pressing for solution, I should say that the first business of the supervisor of English is to develop in the teachers to whom and for whom he is responsible a spirit of sincere and cordial cooperation, an attitude of mutual confidence and friendliness, based on a belief in the supervisor's honesty of purpose and knowledge of the subject and its teaching problems. So important is this element of mutual respect and confidence that if it be lacking, supervision were better lacking

also. Where confidence does not obtain, teachers are likely to take a defensive attitude when approached by the supervisor. They look with suspicion on anything that savors of criticism; they look askance at anything new, anything out of the ordinary. On the other hand, where there is a warm personal attitude of friendliness and mutual regard, supervisor and teachers approach their problems in a constructive, inquiring attitude of mind. The teacher, relieved from the emotion of fear, acquires some of the enthusiasm and zeal of the investigator and learner. She knows that if she makes mistakes, she will not be "checked like a bondman." She knows that if she fails in experiments or methods suggested by the supervisor, he will share the blame; and she knows likewise that if her methods succeed, he will not claim all the credit; in other words, where there is confidence and friendliness there can always be growth.

The supervisor should seek to develop the personality of his teachers. "Be a person," says Kant, "and respect the personality of others." Perhaps no single error is made more frequently by a supervisor than to insist too closely on a certain device or procedure that the supervisor himself has found successful. One of the first duties of the director of the work of teachers is to grasp the basic fact that if a teacher is worth her salt she will have plans and methods of her own which are in some measure unlike those of anybody else. Instead of repressing and discouraging individual habits and traits of personality on the part of his teachers, the wise director will be keenly interested in these evidences of individuality. He will study them; he will move most slowly in discouraging them. Nobody remembers a teacher who was "just like everybody else." The teachers we remember are those who were different, and who stand out in our mind for some ingenious, unique, possibly whimsical or humorous turn or emphasis, some quality that was distinctly their own.

Indeed, the sense of discrimination that enables the supervisor to draw the line between mere eccentricities, unfortunate mannerisms, time-wasting modes of presentation, untenable positions, on the one hand, and new, striking, attention-claiming methods indicative of originality and strength, on the other, is perhaps the last

quality to be developed, though it is one of the first to be tested. The supervisor should understand that his best work will result only as he develops this discriminating sense: only as he encourages and releases all the personal strength and charm of his teachers, helping them to become self-reliant, independent, confident actors on their own stages and in their own rôles, while at the same time he helps them clearly to sense the larger purposes and scope of the whole English problem.

As a basis for this mutual feeling of confidence on the part of teacher and supervisor, and for the development of personality, just mentioned, the supervisor should, of course, be thoroughly acquainted with his teachers, and with their several duties. One of his first practical steps will naturally be to get the program of every teacher in his jurisdiction. He should know her hours and her pupil-load. He should know the conditions under which she works, the room or rooms in which she does her teaching. He should know whether she has a desk or even a drawer in a desk that she can call her own; he should know whether she has time and place for conferences, whether her pupils are properly equipped with books, and what library facilities and reference material are at her service. Fortified by this knowledge, the supervisor is more likely to be sane and helpful in his suggestions.

The supervisor should conserve the time and energy of his teachers. In a group of teachers of English there will always be found a few still laboring under the notion that duty or conscience or some other "daughter of the voice of God" has laid down the immutable law that all the themes handed in by all the pupils in every class must be "corrected" by her with pen dipped in her heart's blood if need be, so that every run-on sentence may be halted, every misplaced modifier returned to its proper abiding place, every awkward phrase endowed with grace, every faulty reference made secure, every disagreement of verb with subject or pronoun with antecedent happily reconciled, every dangling participle decently disposed, with the errors stamped with the red badge of crime, and held up to the attention—or, all too frequently, the inattention—of the embryo writers. If all the hours wasted by conscientious teachers of English in patiently marking

the same errors made week after week by the same pupils were summed up, we should at last discover something in terms of time that would help us to apprehend eternity.

The supervisor should possess that super-vision that enables him to see the futility of marking the same errors week after week on the one-hundred-fifty-word themes of the same boy. He should be able to point out to the teacher that she is not showing any kindness to a boy when she accepts works from him that represents anything short of his best. He must show his teachers how to detect and diagnose the particular and characteristic weaknesses of their pupils, how gradually to eliminate those weaknesses, and how to measure that improvement. He should be able to convince his teachers that there is something wrong when a boy makes the same errors day after day and week after week, and that one of the teacher's first jobs is to ascertain whether or not the pupil knows the right form. If he knows the right form, he must not expect to have work accepted in which these errors persist. If he is not secure in his knowledge of the right form in, let us say, problems of sentence recognition and end marks—his proper field of exercise is not the usual ninth-grade one-hundred-fifty-word theme, but a two-sentence or three-sentence theme.

Any one of several form tests, or, better yet, a test devised by supervisor and teachers in conference, will serve these diagnostic purposes, and, by enabling the teacher—as we used to say on the farm—to put the grease where the squeak is, will save her time and energy, will free her for physical recreation, and for mental rehabilitation and restoration of poise and outlook through reading and observation. For be it definitely recorded that there is no occupation more hazardous mentally and spiritually than exclusive confinement of attention to immature writing. The supervisor can render no greater specific service than to show his teachers how to free themselves from this confinement.

It is surprising to find how little thought some teachers of long experience and unusual wisdom in most directions have given to this problem of time economy in assigning, checking, and evaluating written work. The supervisor will need to show teachers how to construct brief tests that can be easily administered, easily

and promptly marked, and easily interpreted, and that at the same time will sample and measure the accomplishment of their pupils in some definite direction. Many a teacher never has considered carefully just what she wants to measure by a test. If the supervisor can help her to see that if, for instance, it is sentence recognition, a few well-chosen examples will serve the purpose better than a long theme, he will be doing her tremendous service; so with punctuation, spelling of contractions, capitalization, and other form difficulties. Every hour spent wisely in devising a test will save many hours in checking and interpreting it.

The supervisor should be a teacher—I was about to say, a *super*-teacher. No matter how well founded may be the theories nor how wholesome the ideals of the director of the work of others if he is unable to step into the classroom and actually do the things that he asks others to do, there will be a tendency on the part of his associates to discount what he says. "That is all very well," they will say; "but it won't work in the classroom." He must be able to show that "it" will work. He must show a familiarity with the actual pupil needs, pupil interests, and pupil capabilities in the classrooms under his charge.

Further, no matter how well one knows his general field, he will find that no two teaching situations are exactly alike. There is no place like a classroom for learning about supervision. The supervisor who has a regular teaching assignment, or who frequently takes charge of classes, learns things about actual problems and difficulties that he never would think of otherwise. Both for his influence and his information, therefore, the supervisor should teach.

Just as the end of all good teaching is to make teaching unnecessary, so the end of all good supervision is to make the supervisor dispensable. We seek in our schools to develop self-direction in our pupils. We seek to build up in them sound habits and attitudes of mind, wholesome and useful skills and aptitudes. We seek to inculcate consideration for others, right habits and desires in the use of leisure, right impulses and purposes, wholesome social plans and evaluations, an informing and unifying knowledge of themselves, of other people, and of the world about

them. Just so the supervisor hopes to develop, in the teachers with whom he works, a wholesome comprehension of the purpose and significance of their whole field of work. He seeks to make it possible for them to remove themselves frequently from the haste, the pressure, the urge of the immediate and crowding problems of their work, so that they may grow in personality and power. He will not overemphasize what we sometimes call the stimulating or competitive phases of his work, because he will have sensed the fact that the present age tends to overstimulate and undernourish its people. He will emphasize practical helps and wise suggestion rather than anything savoring of competitive zeal. His teachers will not work under him, but with him, and he with them.

As a final word, let me present a statement of what we have tried to do in Elizabeth in this my first year as director of English in that city.

We shall have worked out a course of study in English for grades VII to XII, embracing composition and literature, together with such a treatment of spelling, punctuation, and grammar, as will make these subjects contribute to both of the main fields of our study. It would have saved time had we adopted some course of study at the start, or had one been superimposed by the director; but the course we are working out will better represent our needs and capacities as we see them. Cooperation, I may say in passing, is not justified merely nor chiefly on the grounds of morale; its chief advantage is that it makes use of the wisdom of the field workers.

Second, since we are laboring in an industrial seaboard city, we have a large number of homes in which English is not spoken. About sixty percent of our children come from such homes. As we have the free textbook system, it is entirely possible for our children to go through the twelve years of our public schools without buying a single book. Many of them do this very thing. We made a survey early in the fall which revealed the fact that only a few of our pupils looked on enjoyment of books as an important aim in the study of English. Hence we felt that we should stimulate the buying of good books by our pupils. We sold the list of

"Books for Home Reading" published by the National Council of Teachers of English to nearly half of our pupils, and at the same time made arrangements with local book stores to give a discount of ten percent to our pupils on books included in this list. We controlled this by use of an official slip bearing the name of the book and the signature of the teacher. Our people report a slow but steady gain in the purchasing of books by high-school pupils.

Third, we felt the need of a uniform plan of dealing with all the troublesome matters of form which may be taught and are taught in different ways in different grades and by different teachers: questions of margin, headings, capitalization, letter forms, spelling of possessives, and the like—and we are now working on a joint committee with elementary teachers, to the end that we may arrive at a common practice in the premises, which shall obtain in all schools in the city, thus saving our children the discomfort and disturbance of unlearning what they have been well taught, when they go to a different school or a different teacher in our city. All of our principals, and many of the nearly six hundred teachers in our system are interested in this city-wide problem. We have had particularly happy results already in cooperating with the departments of commerce, science, and social studies in the larger problems of organization of subject-matter for the more ambitious projects of high-school life.

Fourth, we had a feeling that our children were making altogether too many distressing form errors of an elementary sort, particularly in informal composition. We believed that this whole sector of everyday English was too frequently neglected, and that our children were going through school with no adequate training in the *proprieties of informality.* We wanted them to know how to spell the ordinary contractions of everyday speech, how to punctuate short, eliptical sentences, *how, in short, to write informally correctly.*

We felt that the best way to get at this was through some sort of check on the frequency of their errors in this informal writing. We chose to work on three types of difficulties: sentence recognition, capitalization, and the use of the apostrophe. Two exercises were devised, in the form of two informal, chatty letters, of-

fering the same type of difficulties. Form A offered 33 legitimate chances for error, and form B, 34 chances. The letters were mimeographed without capitalization, punctuation, or apostrophes. Form A was given to all the pupils in grades VII to XII in November. Each teacher counted the errors for her pupils, and listed the score on tally sheets, and I tabulated the errors for each grade and for all the schools. In this first test, 3,376 pupils made 29,997 errors, a mean of 8.88 errors per pupil.

Then for six weeks, on our "composition days," we gave some special consideration to this type of difficulty. This was not done to the exclusion of other legitimate interests; we merely took it in our stride, as the football coach puts it. We sought to get our boys and girls to look on rules of polite discourse as the traffic laws of civil intercourse. We tried to show them that just as the traffic policeman serves not to obstruct but to expedite traffic, so the conventions of speaking and writing serve not to hamper us but to make us free in our communication. We tried to show them the difference between incoherence and fluency, chaos and freedom. We wanted them to see that a boy who doesn't recognize sentences when he is trying to write a story isn't playing the game; he is trying to shoot a basket from out of bounds, or to steal second with the bases full. We sought above all to develop in them some power of self-criticism and self-direction.

After six weeks of this work we gave them Form B, and 3,196 pupils made 15,459 errors, a mean of 4.83 errors per pupil, four errors per pupil fewer than were made in the first test. Grade VII-B made in this second test a mean of 5.61 errors, and XII-B made 2.30 errors. Each grade reduced its error score by about 45 percent. The first test indicated that it had taken about three years of routine English work to reduce the error score to that extent. Teachers and pupils are enthusiastic over the results of this study. Experiments made with these two forms under controlled conditions indicate that Form B is slightly easier than Form A, so these results will have to be discounted slightly—perhaps 5 percent to 10 percent. Even so, it appears that particularly with seventh- and eighth-grade pupils, we did in six weeks, in this particular field, what we had been spending three and

one-half years in doing. We are now engaged in similar experiments in grammar and vocabulary growth.

These studies seem to indicate that pupils and teachers and the director can make ponderable progress in English when all are partners and co-workers, with a sporting interest in the enterprise. The teachers can be social engineers, working out plans, developing campaigns, to the end that their pupils may become more free and coherent in their expression and more happy, sensible, and wise in their evaluation and enjoyment of the thoughts of others.

FUNDAMENTAL PRINCIPLES

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Teachers of English are aware of the fact that our course in literature results in comparatively little appreciation on the part of high-school pupils. The authors that are read are usually put aside when the course is finished, never to be read again.

In explanation it might be urged that not all people have capacity for appreciation. The diversity of human interests is a familiar fact. Some people are interested in law, others in medicine, still others in engineering, and so on through an endless list. Why, then, should we expect everybody to take an interest in literature?

This argument fails to satisfy. We have a feeling that literature is somehow different. This feeling is justified, but it is justified only if teaching method is modified so as to recognize the nature of the difference.

This is precisely what has not been done. Certain selections, called classics, are apparently expected to arouse the same sort of appreciation in everybody. Literary appreciation has consequently tended to take on an esoteric character, and to make literary people seem different from ordinary folks. This makes for a great deal of unconscious hypocrisy and for serious misunderstanding of the nature of literature.

In order to foster literary taste there should be more emphasis

on content, so that an insight into meaning may become the basis for appreciation of form. Every normal person has a capacity for appreciating the phrasing of meanings. If the meanings are significant for him, felicity of phrase is bound to evoke appreciation, and such appreciation is the fundamental thing. The appreciation of different people for a literary selection may have reference to widely divergent traits. Literature must become all things to all men. Effectiveness in teaching consists largely in relating literature to the moving forces in the life of the pupil.

It would perhaps be useful for teachers of literature to develop the habit of treating literary appreciation as a relative thing. The reader of the village newspaper who perceives the superiority of the metropolitan daily has advanced a step in literary discrimination; from his standpoint the city newspaper should perhaps be ranked as literature. In teaching it may be expedient to cultivate a liking for forms of literature in order to make it possible to outgrow this liking later on. At all events, the connection of what is classed as literature with the background of experience is both intimate and flexible. Poetry is serious business to the poet, because it is a medium through which his experiences become articulate and acquire enhancement of meaning. It must perform the same service for the reader, even though the difference of experience means an important shift of emphasis. In order to give practical recognition to this fact it is necessary in teaching to provide for a variety of contacts with the experiences of the pupils. These experiences or interests are of many kinds, historical, geographical, biographical, and artistic, and there is no antecedent reason why the selection should not have a different meaning and value to each pupil. This may require considerable readjustment of content and method of teaching, but it will banish the quality of mystery from literature and make it a dominating influence in the lives of men.

HIGH-SCHOOL PRINCIPALS' ASSOCIATION

PAUL C. BUNN, *Principal, High School, Lorain,* Presiding

TELLING THE STORY OF YOUR SCHOOL

CLYDE R. MILLER

Director of Division of Publications, Cleveland

Educational progress rests upon the public's understanding of the aims and accomplishments of education. This is sufficient reason for your efforts to present to the public a picture of your school—to tell the story of your school.

There are a number of avenues to the public mind along which your school can travel to reveal to the community the outstanding ideals and activities of your school.

By far the most important of these avenues is represented by the school itself. Without any conscious effort on the part of the principal, teachers, or other school authorities, your school is more or less accurately revealed to the community of which it is a part. The very school building is an advertisement of the educational effort which goes on within its walls. It is an advertisement, it may be said, of the esteem in which education is held in the community. A splendid school structure, well located and well cared for, is an indication in itself that the community has faith in public education. It is a reminder to the citizens of the purpose for which it was erected and for which it is maintained. Thus the very steel and concrete, brick and mortar, proclaim to all who pass that this is a building dedicated to education.

Your high school may have a dozen teachers or scores of teachers, all of whom have many and various personal contacts with the community. What teachers tell the members of their families, their relations, their friends, and their neighbors about the school represents a very definite and very important contribution to the school's publicity. If the attitude of the teachers is sound, if their morale is good, if they are cheerful in their work, if they enthusiastically believe that they are in a thoroughly good high school, that part of the school's story which they tell not only will

reflect their enthusiasm but will also help to picture the school in a favorable and accurate manner.

In the same way the pupils themselves regard high school as one of the big facts of their lives. They talk about it constantly. They talk school to their parents, to their friends and associates. Did you ever know a high-school student who was not filled with this subject, who was not discussing his school work, his teachers, his classmates, and the various features which make up his school life? Students show also by their attitude and their actions as well as by their talk what effect school life is having on them. This advertising may be good or it may be bad, that is to say, it may reflect an effective school or it may picture one which is ineffective.

The school itself not only makes the story but to a vast degree it tells the story. The telling is done willy-nilly, and this is the best kind of advertising because it comes nearer being the most truthful. If a school is doing its work well that fact will be reflected through teachers and pupils. The teachers, by their talk and their attitudes, indicate very clearly whether the principal commands an organization characterized by good morale; so too, the students reveal whether or not the school is fulfilling its purpose. They, indeed, comprise the real test. If there is a conscious effort to tell the story of a school, it should be predicated on what the school is actually doing for the students and what the students are actually doing as a result of their life in school.

The best automobile advertising is based on automobile performance. No amount of clever advertising can make a poor automobile hold its place in the market long. The best advertising an automobile, a radio, a washing machine, or a piece of dress-goods can have is in the service rendered by the article itself.

The first step in an undertaking to tell the story of a school, then, should be to see that the school has a story worth telling. On every point it should have something definite and tangible in the way of actual performance to talk about. The principal and faculty must have a sincere desire to give to the community the best possible high school they can give with the means available. This is essential. The spirit of the school must be sound. It must reflect honesty, intelligence, courtesy, pleasing personality, pa-

tience, and plenty of good performance. All of these points will help to mirror the school to the public; but there are definite things, of course, which can be done, to carry the school's story to more persons in the community. They include exhibitions of school work, school entertainments, debates, special bulletins and reports, annual reports, school handbooks and school newspapers, to which last special emphasis should be given. The school paper is well justified on many grounds. It has real educational value. It is far better than the routine theme or composition to provide laboratory practice in the writing of good English. Service on the school paper helps the student carry responsibility, whether he be on the editorial staff or the business staff. If he is on the editorial staff he must write and edit the school news. He must discover the important facts about the school. He must be accurate. He must present the facts in an interesting manner. He must carry definite responsibility as one of the paper staff. All of these provide excellent training.

The school newspaper is an important factor in building a desired school morale. It can do for a school what a good newspaper can do for a city. It can build that community spirit without which worthy activities requiring common understanding and common action cannot flourish.

This involves character development for the student editors and writers as well as mental training. At the same time the business staff of the school newspaper is a laboratory for practical training in business management, advertising, salesmanship, circulation, accounting, bookkeeping, and banking.

Experience on a school-paper business staff provides useful knowledge and leads to the formation of desired habits. The school newsaper, if well done, will be pleasing to look at. It will be interesting to read and the articles in it will be of a helpful as well as interesting nature. It will reveal the school unto itself; and in our large city high schools and in our consolidated rural high schools such a revelation is not unimportant. Some of our high schools have an enrollment running into thousands. The school itself is a large community. As a town or city needs the service of some medium to reveal its own varied activities

to itself, so the high school requires the service of a medium of revelation. The school paper is such a medium. If it is well done it will mirror and reflect every phase of school life. It will set forth the school's ideals. It will record every accomplishment towards the attainment of those ideals. It will create and maintain a wholesome atmosphere. It will set up better standards of discipline and will solve many problems of discipline. The school paper will cooperate with every worthy activity going on within the school, whether curricular or extra-curricular.

THE HIGH-SCHOOL PRINCIPAL AND HIS RESPONSIBILTIES

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It is difficult for us who are engaged in the daily task of teaching and administration to realize how rapid and far reaching are the changes which are going on in our schools from the lowest grades through the university. A comparison of the situation today with that of twenty-five years ago as regards the aims of education, the material equipment, the scope of the curriculum offerings, the methods of instruction, the number of teachers employed and of pupils in attendance furnishes impressive evidence of the development which has taken place within the teaching experience of some of us. And these changes are progressing at an accelerated rate.

These changes are most marked in the secondary schools. I recall hearing that prophet and leader of progressive education, President Eliot, say in 1897, that the most significant fact in the educational situation was the rapid expansion of the secondary school. The increase in attendance of our secondary schools in the past five years now equals the entire attendance of twenty-five years ago. Not only have the secondary schools increased by leaps and bounds in numbers of pupils, but the scope in years has doubled. From the four years, crowded by accident between the elementary school and the college, the high school is taking over the seventh and eighth grades of the lower school and is reach-

ing up to include the first and second years of the college. It is rapidly becoming the longest link in our educational chain from the kindergarten through the university. Quite as significant as the growth in numbers and expansion in years is the change in aims and in materials of instruction of the modern secondary school. From the aristocratic aims which restricted its benefits to a chosen few, the high school has broadened until its aims are coterminous with the needs of a democratic society. Not only has the scope of the curriculum been greatly enlarged, but the traditional subjects are undergoing such complete reorganization that one would hardly recognize in general science, general mathematics, and the social sciences our old friends of a few years ago.

It is not pertinent to my subject to discuss these changes at greater length. I have presented some of them in hurried outline in order to set up the situation in which the high-school principal finds himself at this time. There was never so much to thrill our imagination and arouse our zeal. Like an army which has made a rapid advance, it is our present task to consolidate our lines, to dig in and strongly hold the ground we have gained.

The rapid expansion of the high school in the number of pupils and in the scope of its activities has made inevitable a change in the conception of the responsibilities of the principal and the manner in which he may most effectively spend his time. The principal was once a teacher among teachers who, in addition to his teaching, carried certain responsibilities and performed certain extra duties which justified the larger salary that he received. In the smaller high schools of today the principal usually carries a fairly heavy teaching program and in some large city schools he teaches one or more classes daily. With the increasing complexity of the organization of the school, however, the principal has been forced gradually to transfer his activity from the classroom to the office, where in his swivel chair he has tended to become buried in the multitude of administrative details that grow out of his relations with pupils, parents, teachers, superintendent and school board, and the general community. In this confusing whirl principals, for the most part, find themselves at the present time. While they are exceedingly busy, it is not surprising that

many, perhaps most, are ineffective to a greater or less degree when the larger aims of the school are considered. To meet adequately the demands which now confront him, it is important that the principal have in mind certain fundamental guiding principles. Only thus can he determine the relative value of the tasks which surround him and demand his attention. I shall present three such principles for the administration of the high school.

The Principal is the Responsible Leader of the School

As a responsible leader, the principal should have a clear conception of the aims of secondary education and should see that his teachers understand these aims and are guided by them in the performance of their several duties. He should so organize the formal routine and the more informal social activities of the school as to develop in the pupils right ideals, attitudes, and habits of work and of conduct which will be effective in mature life. He should have intimate knowledge of the work of the lower schools from which his pupils come and should see that the work of the high school and the elementary school are closely coordinated. He should be acquainted with the requirements for admission and the character of the higher institutions which will be entered by those pupils whose education will continue beyond the high school. He should see to it that parents have such an understanding of the general aims of the work and discipline of the school as will secure their active cooperation in obtaining the fulfillment of these aims and in promoting the further development of the school. He should keep the superintendent and board of education informed of the achievements of his school and should make constructive recommendations for its improvement whenever their approval or cooperation is necessary to bring about the improvements desired. Of these six specific responsibilities of the principal as leader, the first is of paramount importance.

1. *Should have clear conception of aims.*—Choice of materials suitable for instruction and methods of instruction and discipline are dependent upon the aims set up as desirable. Without clearly defined and understood aims the work of the school is determined by choice or traditional practice and lacks the unity essential to

its highest efficiency. It is safe to say that in most schools no such statement of aims has been formulated. The principal should not meet his responsibility for leadership in this regard by executive pronouncement. He is no Moses to bring down the tables of the law from the mountain top. In the smaller school through a committee of teachers, in the larger school through a council of his department heads, he should secure the extended and deliberate formulation of aims which will represent various points of view beside his own. A later discussion, and the final adoption by the entire faculty, will bring these aims clearly before the teachers and will make them vitally effective throughout the school. It is also important that each department should formulate its own specific aims, consistent with the general aims set up for the school as a whole. A series of meetings devoted to the discussion of these departmental aims would contribute greatly to the professional growth of the entire staff, would bring about a better understanding of the relationships in the work of the different departments, and would make for greater unity in effort and accomplishment.

2. Should be responsible for leadership.—The principal's responsibility for leadership in social control, both in the formal routine and discipline and in the more informal social activities of the school, is related closely to the discussion of the previous paragraph. A broad statement of the aims of the high school cannot omit this important phase of school life and its possibilities for the development of ideals, attitudes, and habits which will be socially valuable in mature life. The methods of control, usually spoken of as discipline, should grow out of a clear conception of ends to be attained. The social life of the school in the form of clubs, athletics, and other types of extra-classroom activities should be so organized and controlled as to contribute to the achievement of definite and worthy social ends. The contribution which the school can make through these agencies to the training of its pupils will depend almost wholly upon the quality of the aims and the degree in which they are understood and made effective throughout the entire school. Here, also, the principal will best meet his responsibility for leadership by securing the

formulation of aims and standards through group discussion. Moreover, as the intelligent cooperation of the pupils, as well as that of the teachers, is essential in attaining these aims, he should secure through the student council or other representative groups an understanding and acceptance by the pupils of the social aims and standards of the school.

3. Should have knowledge of the work of the lower schools.—The transition from the elementary school to the high school, with the attendant change in subject-matter and methods of instruction and discipline, has been responsible for tremendous waste in our system of public schools. The lack of acquaintance on the part of high-school teachers with the work of the elementary schools has been responsible for an unnecessary break in the progressive development of the pupils. It is customary for teachers of first-year classes in the high school to complain of the lack of preparation which their pupils have received in the lower schools, while they themselves have little definite knowledge of what their pupils have or have not been taught or of the manner in which instruction has been given. This situation results in a diminished effectiveness of instruction in the high school and an increased elimination of pupils. One of the reasons for the establishment of the junior high school has been the expectation that it would make for a more coherent organization of the work at this period of greatest waste. The principal should himself be acquainted with the material and methods of the upper grades of the elementary schools and should see to it that the early work of the high school is conducted in such a way as to secure a sequential development at the period of transition to the higher school. The principal should conduct conferences of his teachers of first-year classes for the purpose of acquainting them with the work of the lower schools and of securing a better adjustment of high-school instruction to the needs of first-year pupils. It would be advantageous to secure the participation of principals or teachers of the upper grades of the elementary schools in these conferences.

4. Should have knowledge of entrance requirements of higher schools.—It is much more important that the principal should be acquainted with the work of the elementary school than with

that of the college. On the whole, however, he has usually thought more of the latter. The curriculum and content of high-school courses have been influenced all too much by college requirements. It is still important that the principal should have complete knowledge of the requirements of higher institutions in order to meet the needs of the very considerable number who will continue their education beyond the high school. He should also know enough about the character of the different colleges to advise pupils in their choice. There are voluntary associations of schools and colleges in the different parts of the country, and secondary-school conferences are held at the various state universities and many private institutions. The principal should avail himself of these opportunities for keeping informed on all matters that are involved in the relationship of the secondary school and the college. He should also give to college officers such personal information as will assist them in dealing with each pupil who goes on from his school and should follow up the work of each pupil, at least during his first year in college, both for the purpose of discovering how well the work of his school prepares for the higher institution and for the help that he may be able to give his pupils in their adjustment to college work.

5. Should enlist active cooperation of the parents.—The fact that the school is an agency through which society undertakes to secure its own perpetuation and advancement places upon the principal the need of considering his relations to the community as a whole and to various groups and individuals outside the pupils and teachers of his school. The principal's first responsibility is within the school, and to its internal organization and direction he must devote himself primarily, but if his interests and activities stop at this point he will fall short of the achievement of the highest success. The most natural point of contact is with the parents of his pupils and with these he will have relations of a more or less personal nature. The wise principal will strive to develop among the parents such an understanding of and sympathy with the aims and methods of his school as will secure their active cooperation and support. He should himself conceive of the school as a cooperative enterprise in which teachers and

parents are engaged in securing certain desirable ends for children, and he should take every possible measure to secure this conception on the part of parents. He should not think of himself, nor should he allow the community to think of him, as an employee hired simply to administer certain prescribed treatment, disciplinary and instructional, to a group of children within the school building during an eight-hour day.

In contrast with the smaller community, the complex social life of a large city renders it more difficult in some respects for the principal to meet his responsibility in this regard. The wide variation in social experience and vocational needs, however, represented by the pupils of a large city high school greatly increases the importance of the principal's leadership in this particular. In whatever community the principal finds himself he should study the characteristic social conditions and needs of his pupils and endeavor in appropriate ways to secure increased cooperation between the school and the community in meeting these needs.

6. Should report the progress of the school regularly to the board.—In his relations to the superintendent and board of education the principal has not met his responsibility when he has complied with the formal requirements which are prescribed from above. His intimate acquaintance with the problems of secondary education as presented by his own school places upon him the responsibility for influencing, through proper channels, those who are in charge of the larger policies of the entire school system. The principal should make a careful study to ascertain to what degree his school is meeting the present and future needs of its pupils. So far as the defects discovered are capable of removal with the facilities already available, he should apply the necessary remedy. For improvements which cannot thus be secured, he should make constructive recommendations to those in authority and should employ all proper means to secure the adoption of his recommendations. In cities with several high schools a council of principals might well be formed for the discussion of general policies and methods of procedure which would serve a useful function in disseminating information regarding successful

methods of administration and in securing desirable unity in fundamental aims and methods. There would be the additional advantage that recommendations to the superintendent or board of education from such a council would carry greater weight than if they came from an individual principal.

The Principal is Responsible for the Direction of all Activities

1. The selection and organization of the subject-matter of instruction.—In a city having more than one high school and in fact in some cities with only one high school, the principal is not always directly responsible for the organization of the curricula offered in his school. He is in any case responsible for adapting the prescribed curricula to the needs of the pupils of his school. More than this, in case the curricula do not meet the demands set up by the aims of education as formulated by the faculty under his direction, it is his duty to attempt vigorously to secure such changes as will bring about conformity between curricula and aims. As regards subject-matter of instruction his responsibility is more definite. He should see to it that the material of instruction employed in the classroom is such as will meet the needs of the pupils. The fulfillment of this responsibility does not require that the principal possess expert knowledge of the subject-matter of all courses offered in his school. It does require that he possess a clear knowledge of the principles underlying the selection of subject-matter, and that he see that the materials of instruction are chosen in accordance with these principles.

2. Instruction.—The principal should have expert knowledge of the general methods of teaching and should see, directly or indirectly, that his teachers employ these effectively in their several subjects of instruction.

As in the case of subject-matter, this thesis does not imply an expert knowledge of the special methods employed in teaching the various subjects. The training of high-school principals has not generally given them even the knowledge of general methods requisite for effective supervision of instruction. Moreover, it is the common practice of principals to carry such weight of

routine administration as precludes the possibility of giving sufficient time to supervision of teaching. The statement that teaching is the one activity of supreme importance through which the school performs its function needs no supporting argument. The manifold details of administration have as their ultimate aim the securing of the most favorable conditions for carrying on the teaching process. Any material advance in the efficiency of the schools must be gained through the improvement of classroom instruction. The training and experience of high-school teachers does not warrant the assumption that they are good teachers. Provision for skillful supervision is a fundamental and almost universal need of our high schools.

It is not pertinent at this point to enter upon a discussion of the technique of supervision. The principal should recognize the improvement of instruction as the most important end to be secured. The amount of time that he himself will devote to teaching and to the numberless routine details of administration must be determined with reference to this fact. To secure the necessary assistance to relieve him from other less important duties and to enter upon a task to which he is unaccustomed and for which he has not received special training will require a very considerable degree of initiative and energy.

3. *Routine administration.*—With the rapid increase in enrollment and in the scope of the subjects of instruction of our secondary schools, it is difficult for the principal to escape the pressure that inevitably tends to confine him to office routine. The position which he occupies and the salary which he receives should require from him the services of a professional leader, not of a clerk. Boards of education in their provision for the administration of the high school do not usually display the sagacity which they show in the management of their private business affairs. Inadequate provision is made for such administrative assistance as is necessary if the principal is to perform the professional functions required of him in a modern high school of maximum efficiency. Although he may succeed in delegating a large amount of detail administration to other members of his teaching staff, he will still, in most cases, be held down to a

routine which prevents the attainment, even approximately, of the ideals which have been set up in this paper.

4. Social activities.—Another type of activity for the direction of which the principal is responsible is found in the social activities of the school. The important part which these activities may contribute to school morale as well as to the training in right social attitudes and habits makes necessary careful provision for their organization and control. The importance of the direction and control of these activities is increased by the fact that through neglect or wrong social ideals they have often come to be injurious in their effects. Examples of the undesirable results that sometimes attend these activities may be found in some schools in an undue emphasis upon athletics and other forms of social life or in the introduction of the undemocratic fraternities. The principal is responsible for a program by which these activities may be made to contribute constructively toward the attainment of the aims of the school. It is particularly important that these activities be conducted on a democratic basis, which will offer opportunities for the development of social responsibility and leadership.

The Principal Should Delegate Some Responsibility to Others

As has already been indicated, the principal is usually overburdened with the performance of administrative details. To indicate the extent to which this is true the following quantitative facts are given from the reports made by the principals of the high schools of a large city as to the amount of time devoted to various routine duties each day. The maximum time reported by any principal is given: excusing absences and tardiness, 20 minutes; discipline, 60 minutes; interviews with pupils (not disciplinary), 60 minutes; interviews with parents, 45 minutes; interviews with teachers (not regarding methods of teaching), 120 minutes; correspondence, 120 minutes; showing visitors about the school, 120 minutes. In addition to these items of daily routine, one principal reported a total of 264 hours spent each year in schedule-making and the classification of pupils.

To secure the necessary time for more important professional

duties the principal must delegate many of these tasks. He is fortunate if he can secure an assistant principal and an adequate clerical force. In most cases he will find it necessary to assign administrative duties to members of his teaching staff. This sharing in the performance of administrative tasks is a valuable experience for teachers, unless, as is too often the case, it increases a load already heavy enough. The types of duties which may be delegated, not all of which are found in every school, include the following: (1) departmental organization, in which heads are made responsible for departmental equipment, reports, courses of instruction, choice of textbooks, and for unifying and improving the work of their departments; (2) making schedule of recitations; (3) excusing absence and tardiness; (4) routine discipline; (5) organization and direction of continuation classes; (6) vocational direction; (7) study-hall control; (8) control of extra-curricular activities; (9) clerical duties; (10) interviews with parents. Besides these, many other forms of routine, not easily classified, requiring occasional attention on the part of the principal, may be delegated to others. It is unfortunately true that anything that is nobody else's business is the principal's. The successful principal must delegate the greater part of this varied routine to others and must see that the duties thus delegated are performed in such a way as will promote the aims of the school as a whole.

To meet the standards implied in these principles it is not enough that a principal be a good teacher, a skilful disciplinarian, a good mixer, or practical politician. Each of these qualifications is desirable; all combined in the proper proportion go far to assure success. There are, however, at least two other qualifications needed.

The first is training. The direction of a modern high school is too intricate and too important a task to justify the trial-and-error method. Requirements of professional training for teachers and principals are rapidly advancing and to their credit it should be said that our teachers are crowding our training institutions in advance of these formal demands, impelled by their sincere desire for self-improvement. The principal is com-

ing to realize that he is the leader of a group of teachers, themselves professionally trained, and that for this leadership he needs the best professional training he can secure.

The second qualification needed is a thing of the spirit. The principal must not think of leadership as implying chiefly the right or the obligation to command or coerce. Autocratic control may produce an orderly procedure, superficially admirable, but sets up hindrances to the highest achievement. The principal must be a democrat through and through. He sees the larger aims of his school more clearly than his individual teachers, but he must realize that the attainment of these aims can come only by the combined efforts of all from the janitor to the department heads. The principal as a leader will recognize the special abilities of all his staff and will help each to develop to his fullest capacity. He will be too big to be jealous of the popularity of any teachers, too honest to lay claim to any achievement not his own. He will rejoice when his teachers outgrow any position which his school can offer and speed them on their way with his blessing. To such a principal supervision is not an irksome task, and to his teachers his visits are not occasions of dread. The principal should have a philosophy of administration which may be reduced to simple working terms. It should be based on a clear conception of the aims of education best adapted to his school, around which all details of organization, instruction, and control will arrange themselves and to which they will make their peculiar contributions. This philosophy will regard all who have to do with the school, the staff, the pupils, and the community as a whole, as sharers with him in the responsibility for the school's highest success as well as recipients of its benefits. The principal with such a philosophy, constantly directing his activities, will be in a very real sense an educational leader.

In view of this discussion as a whole it is evident that there is demanded of the principal an unusual degree of ability in organization and direction. The manager of an industrial plant directs a group of workers in the process of turning inert matter of known properties into a product whose standards and uses are clearly defined. The principal has a far more difficult task. The

raw material of the school consists of human beings, with an almost infinite variety of abilities and aptitudes, and the standards for judging the finished product and the uses to which it may best be put are not capable of easy definition. Traditional practice and the conception of school boards and the general public inevitably tend to make the principal a performer of routine tasks whereas the position demands a professional leader, who shall direct with judgment and skill an organization of exceeding complexity. The principal must regard himself as a leader, responsible for organizing and directing his school so that the particular group of pupils under his charge shall receive the training that will best prepare them to meet the demands which society will place upon them. While responsible for all the activities of his school, he must determine from careful consideration of all the elements involved how he may best employ his time and efforts in order to meet the responsibilities which are his. He must so delegate the necessary tasks involved in the management of his school, requiring the responsible performance of all delegated duties, that he may devote himself to the higher professional duties of his position. And to reach a practical outcome the principal must consider carefully the relative importance of the various activities for which he is responsible and make out for himself a schedule, definite and complete, which he will highly resolve to follow.

SOME PROBLEMS OF THE NORTH CENTRAL ASSOCIATION

Frank D. McElroy
Assistant Superintendent of Schools, Akron

In the beginning the North Central Association was comprised of only a few schools and colleges located within a short radius of Chicago. From that a gradual and steady growth has extended the Association to cover twenty states, two hundred and twenty-five institutions of higher learning, eighteen hundred high schools, sixty thousand teachers, and seven hundred and twenty thousand high-school students.

The territory included in this Association now extends from Montana to Ohio, and West Virginia to the southwest, including New Mexico and Arizona. Shortly following the organization of the North Central Association, the Southern Association was organized, including eleven states, from Virginia to Texas. The Northwestern, including five states, followed shortly after that. The Middle Atlantic States and Maryland were organized one year later. The organization of the New England States completed the territory of the nation.

The organization is composed of three commissions, the Commission on Secondary Schools, the Commission on Higher Education, and the Commission on Unit Courses and Curricula.

The secondary commission is made up of state committees and members at large. The state committee is composed of three, a representative from the university, a representative from the state department, and a representative from the high school. The commission on higher education is composed of twenty-seven college and university men, and eighteen public-school men. The Commission on Unit Courses and Curricula is composed of twenty-four men, half being college and university men and the other half public-school men. At the last meeting the state Committee was increased by the addition of one superintendent acting in an advisory capacity.

During the thirty years the purpose of this Association has changed in scope. The original purpose was the accrediting of secondary schools for college entrance in order to prevent high-school graduates from taking college-entrance examinations. Only such subjects as directly concerned college entrance were considered. This provision has not changed. At first the inspection of the teaching of these subjects by representatives of the colleges constituted the only basis for approval. Standards began to be formulated. Each year a Committee on Interpretation and Revision of Standards has worked on this problem.

Every year changes have been made to adapt the standard to the changed conditions of secondary education. No one in the Association feels that the present standards are final. They have never been more than tentative, but I did not mean to emphasize

that in connection with accrediting for the reason that the North Central Association has ceased its accrediting function. I should like to repeat that lest some one might have missed the purport of the statement—"this Association is no longer an accredited institution." There may be many in the Association that will object to that statement. Nevertheless it is true, and if any of you here have been holding membership in the Association because you wanted your high-school graduates admitted to a college without examination, you need no longer strive. The purpose of the Association is to standardize secondary education, higher education, and high-school and college-unit course. Any other statement of purposes will not hold.

Nothing more wholesome could happen to the North Central Association than that every principal and superintendent in this entire territory be fully appraised of this fact. The Association is a standardizing association and a medium through which standards are distributed. The only purpose then in meeting the standards of the North Central Association is the approval which will come by so doing.

The problem, then, of this Association can easily be summed up as a problem of development of standard, the meeting of which will work for the greatest efficiency in high-school and college instruction. This problem is difficult. Secondary education is new. Surveys and experimentations are constantly changing educational conceptions which in turn bear upon standards. Public-school men are constantly urging the lowering of standards because of economic pressure. A tremendous amount of political and social pressure is constantly bearing upon the Commission of Higher Education to lower the standards for the sake of poorly endowed colleges and universities.

The hope of this Association is that it may continue to maintain standards which recommend themselves to the approval alike of university and public-school men; and that this common meeting ground may be pleasant as well as profitable to both.

MOTOR ABILITY TEST

F. W. Maroney
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The subject of athletic tests is not new. In fact, the present-day journals of education vie with each other in the recording of tests and measurements. No longer are we satisfied with the pupils' answers as to dates, problems, solutions, equations, knowledge of formulas, and rules of syntax. The workers in the psychological laboratory have compiled intelligence tests in practically all school subjects. In fact the stimulus given to mental tests by the psychologists during the period of the Selective Service Draft Work has resulted in nation-wide interest.

For many years we have worked with athletic tests and measurements. These have been based upon the records of skilled performers, picked men—men who were favored with expert coaching and whose records were made in competition under favorable conditions. Then, too, we have used athletic tests based upon height, weight, age, and grade. Much good has resulted from this type of test. It may be said in passing, that an enthusiastic teacher who really believes in the thing he is doing, can secure interest in and derive good from any type of test he elects. Recently the test devised by the late Dr. Sargent has been given wide use and with it we are invited to consider A Test of Physical Efficiency: The Correlation between Results Therefrom and Results from Tests of Mental Efficiency, devised by Schwegler and Engelhardt of the University of Kansas. Dr. Barrow of Stanford University proposes a new General Athletic Ability Test, while Collins and Howe, of Wellesley College, write on "A Preliminary Selection of Tests of Fitness."

So it goes. We have laid aside the question of the relative merits of the German and Swedish systems; we have for the time being decided on a truce with our friends who, never having actually felt the thrill which comes from performing or seeing performed an exacting piece of calisthenic or apparatus work, tell us that an informal program of physical education will solve all of our troubles. We have even permitted the subject of men's

athletics and athletics for women—important as they are—to be forgotten as we rush into this new thing in physical education.

The December, 1924, edition of the *American Physical Education Association Review* contains a Report of the National Committee appointed by President Carl Schrader to investigate "Motor Ability Tests." In this preliminary report, written by Dr. McCurdy, chairman, you will note that the preparation of the tests was made possible through the cooperation of the Laura Spelman Rockefeller Foundation. You will also note that the personnel of the committee includes men and women engaged in both school and college work.

The Motor Ability Committee for 1924 agreed on the following basis for the tests:

1. Tests are to be judged on the success or failure basis.

2. Tests are to be measured in the athletics by *one* performance scale for boys and *one* for girls, rather than one scale for elementary pupils, one for secondary pupils, and others for college groups.

3. Age, height, weight, scholarship, and other factors are not used in constructing the scales, though it is clearly seen that there may be definite performance levels for different ages and for other factors. The Committee believes *one* performance scale will simplify the present methods.

4. Index numbers are used, where needed, to convert the performance record into the school grade; for example, a boy securing 40 from the high-jump scale might deserve a school grade of 80, which would be secured by multiplying his 40 by 2, giving him a school grade of 80. This method measures all similar activities by the same scale, rather than by a changing scale. The present methods bring as much confusion as if we had twelve inches making a foot for twelve-year-old boys and fourteen inches making a foot for fourteen-year-old boys.

5. Zero represents the low mark and 100 the high mark, with 100 plus, or AA for those going above the scale. Directors are asked to keep the actual records above 100 for use in perfecting the scales.

6. The purposes of the tests were agreed to be: (1) the securing motor ability related to physical fitness and health; (2) the securing motor ability related to the skills in trades and industries; (3) the securing skills needed for a well-rounded recreative life; (4) the development of bodily control as a protection from accidents; and (5) teaching the fundamental team skills because of their aid in developing social and moral values.

7. The Committee recommended for later study, the team-game reactions,

the crowd stimuli, and psychic factors related to mental adaptions in games, and to character factors.

The Committee also recommended eight groups of activities:

1. Free exercise (without use of hand apparatus)
2. Calisthenics (with use of hand apparatus)
3. Marching
4. Dancing
5. Track and field athletics
6. Team-game activities
7. Apparatus exercises and tumbling
8. Swimming

Dr. McCurdy and I were detailed as a subcommittee to work out the subject of free exercises. We assumed that balance, posture, and body control were essential to success in the physical life of an individual. Parenthetically, I would call your attention to the fact that the infant acquires skill in sitting, standing, and walking as he learns to control his muscles, to use his eyes, and to profit by the development of his semicircular canals. Studies in anatomy and physiology have taught the importance of the semicircular canals in maintaining equilibrium. In fact in Meniere's disease, thought to be due to a hemorrhage in the semicircular canals, the outstanding symptoms are vertigo and immediate loss of body balance.

To quote from the committee report:

All big muscle skills depend upon a healthy neuro-muscular mechanism for coordinated actions in muscle balance, upon aid from the eyes in adjusting muscle positions in equilibrium and upon the semicircular canals. At least two of these judgments must be present for the person to walk or do any complicated equilibrium movements. A blind person is handicapped in walking. If two of these functions are impaired, skilled acts in big muscle balance are difficult or impossible, depending upon the extent of the injury, for example, inner-ear deaf people find great difficulty in walking in the dark. They will not attempt to walk across a plank in the night that they would readily try in daylight. Deafness and temporary blindness due to darkness have reduced the equilibrium judgments to merely muscle sense. Either eyes or ears must aid muscle sense to make equilibrium possible ....

The child of one year learns its first big muscle balance, namely, to stand and walk. The aviator flying in the fog, or the person blindfolded finds how dependent he is upon his eyes for balance adjustments. Standing on one foot with the eyes open is easy, but with them closed it becomes difficult, because use of the judgment of the eyes is taken away. Balance,

without the eyes, becomes chiefly a matter of muscle sense and the semicircular canals.

The part of the Motor Ability Tests devoted to calisthenic of free exercises, in order to conform to the success or failure basis of the plan in general, consists primarily of balance positions on one or both feet, with or without arm positions, and trunk positions; with jumps or hops preceding or following the balance, and with the eyes open or shut.

As a member of the committee and as one interested in the Motor Ability Tests, I felt it incumbent upon me to try the tests with selected groups of pupils. The tests were given under regular classroom conditions. They were explained to teachers and pupils, demonstrated by the physical-training supervisors, marked and passed upon by the teachers and physical-training supervisors. In order that time might be saved, and this report prepared, the four tests, October, December, February, and April, were given once a week until a representative number of pupils had been tested.

MOTOR ABILITY TESTS

Free Exercises

Note I.—A pupil passes the test if he holds his balance for fifteen seconds, that is, if he does not move his foot or feet during the time of the test.

Note II.—In exercises with the eyes closed, the eyes should be closed before the exercise begins.

Grade I

October test.....Close walk-standing position.
December test....Close walk-standing position, eyes closed, arms sideways, raise palms up.
February test.....Close walk-standing position, eyes closed.
Close walk-standing position, neck-firm position.

Grade II

October test.....Forward close walk-standing position.
December test....Forward close walk-standing position, eyes closed, raise arms sideward oblique upward.
February test.....Forward close walk-standing position, with eyes closed.
April test.....Forward close walk-standing positions, eyes closed and head-press, fingers touching top of head, elbows well back.

Grade III

October test.....Heel-raising position from close walk-standing.
December test....Heel-raising position from close walk-standing, eyes closed.
February test.....Heel-raising position from close walk-standing, eyes closed, with arms raised forward.
April test.....Heel-raising position from close walk-standing with arms forward bend position.

Grade IV

October test.....Heel-raising position from forward close walk-standing.
December test....Heel-raising position from forward close walk-standing, eyes closed.
February test.....Heel-raising position from forward close walk-standing, eyes closed, with arm-raising backward.
April test.....Heel-raising position from forward close walk-standing, eyes closed, with arm bending (arms upward bend).

Grade V

October test.....Deep knee-bending position, back of fingers touching heels, arms touching hips behind.
December test....Deep knee-bending position, eyes closed.
February test.....Deep knee-bending, eyes closed, arm raising backward.
April test.....Deep knee-bending with eyes closed and head-press.

Grade VI

October test.....Leg raising forward (9 to 12 inches).
December test....Leg raising forward, eyes closed.
February test.....Leg raising forward, eyes closed, arm-raising backward.
April test.....Leg raising forward, eyes closed, head-press.

Grade VII

October test.....Leg raising backward (9 to 12 inches).
December test....Leg raising backward, eyes closed.
February test.....Leg raising backward, eyes closed, arm forward bending.
April test.....Leg raised backward, eyes closed, arm raising forward upward.

Grade VIII

October test.....Leg raising sideward (9 to 12 inches).
December test....Leg raising sideward, eyes closed.
February test.....Leg raising sideward, eyes closed, neck firm.
April test.....Leg raising sideward, eyes closed, head-press.

Grade IX

October test.....Jump forward 2 feet at least to deep knee bend (hold 15 seconds).
December test....Jump forward 2 feet at least to left or right foot with opposite leg raised forward 1 foot high (hold 15 seconds).

February test.....Jump forward to deep knee (5 seconds). Jump forward at least 1 foot on to left or right foot with leg raising forward (1 foot) hold 10 seconds.

April test.....Jump forward on left or right foot, with leg raising forward (hold 5 seconds) then backward leg swing to body horizontal. With standing knee bent (5 seconds). Return to first position of leg raised forward, 5 seconds (15 seconds in all).

Grade X

October test.....Jump sideward at least 1 foot to deep knee bend, hold 15 seconds.

December test....Jump sideward, left on to right foot (at least 1 foot) with left leg raised sideward (hold 15 seconds).

February test.....Jump sideward right to deep knee bend (5 seconds) jump sideward left on to right foot, left leg raised sideward left, hold 10 seconds.

April test.....Jump sideward left on to right foot, left leg raised sideward left; hop on to left foot, right leg sideward right, hop change to left leg sideward left, each 5 seconds.

Grade XI

October test.....Jump backward at least 1 foot to deep knee bend, hold 15 seconds.

December test....Jump backward at least one foot on to left, or right foot, with opposite leg raised backward (hold 15 seconds).

February test.....Jump backward to deep knee bend (5 seconds). Jump backward on left or right foot, with opposite leg raised backward (5 seconds) then hold this position with eyes closed (5 seconds).

April test.....Jump backward on left foot with right leg raised backward (5 seconds), change hop on to right foot, left leg raised forward (5 seconds) then hold this position, with eyes closed, (5 seconds).

Grade XII

October test.....Jump forward on to left or right foot with opposite leg raised backward (15 seconds).

December test....Jump backward on to left foot, raising right leg backward, 15 seconds.

February test.....Jump forward on to left foot, right leg raised backward (5 seconds) then leap forward on to right foot, left leg raised forward (5 seconds) then leap forward to deep knee bend (5 seconds).

April test.....Jump forward on to left foot, right leg raised backward (5 seconds) then leap forward on to right foot, left leg raised forward (5 seconds) then leap backward on to left foot, right leg raised backward (5 seconds).

TABLE I

RESULTS OF THE FOUR TESTS IN EACH GRADE SUMMARIZED

Grades	Number of Pupils	Percent Passed
I	1,888	93.2
II	1,736	81.5
III	1,712	79.0
IV	1,724	76.1
V	2,260	80.9
VI	2,016	66.7
VII—Girls	1,116	63.7
VII—Boys	576	61.7
VIII—Girls	812	67.2
VIII—Boys	532	61.0
Vocational—Girls	160	32.5
Vocational—Boys	296	42.9

GENERAL CONCLUSIONS

We did not try to prove any point in making the tests. Naturally, we believed that the pupils who had directed physical training over a number of school years would stand higher in the tests, than those who had not. The results obtained by the elementary-school pupils in the four tests are summarized in Table 1. We were interested in a comparison between the pupils of subnormal intelligence, the so-called feeble-minded or Binet-class pupils, with normal children of feeble-minded or Binet-class pupils, with normal children of the same school grade. These four tests were given to the pupils in an eighth-grade special class whose average intelligence quotient was 70. Of these 112 pupils, 53.2 percent passed in December, while but 34.6 percent passed the tests when repeated in March. Our tests proved conclusively that the subnormal children were distinctly below the so-called normal pupils in the tests. The span of attention and the interest taken in the tests were greater in the elementary grades than in the special classes. An interesting, if not valuable part of the test, showed that girls and boys of the vocational schools ranked

materially lower than pupils of the same grades in the regular school.

The high-school girls and boys were given the four tests early in December, 1924, and these tests were repeated with the same groups late in March, 1925. Their interest was keen. They tried to improve their standards shown by the December examinations. The results they attained seemed to prove that regular physical-education work in an all-around program, plus the interest which was aroused by tests, was responsible for this increased ability.

We recognize that there is danger in the acceptance of tests and measurements for regular lesson activities. An enthusiast, not grounded in the importance of such activities, may be tempted to use the lesson time for testing and chart-making, and may draw conclusions which do not always prove the case.

There should be a word of caution given to all young teachers in the application of tests and measurements to their physical-training work. The Motor Ability Tests, Free Exercises are not of necessity the last word in this type of test. Much work needs to be done, and there is a field of investigation for all of us. I believe, however, that the tests are fundamentally sound. They should be included in good physical-training programs, not to measure the teacher's ability, but rather to arouse in the pupil an appreciation of physical responsibility and a realization of the possibilities of increasing motor skill through a general program which includes specific measurable activities.

HISTORY

W. H. Siebert, *Ohio State University,* Presiding

THE PLACE OF HISTORY IN EDUCATION FOR CITIZENSHIP

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Before attempting to solve the problem of the place of history in the training for citizenship, it seems necessary to define our terms, so that we may be on common ground throughout the discussion. This will avoid ambiguity or confusion. Professor Henry Johnson, of Teachers College, Columbia, insists that there are two concepts so fundamental in our thinking that they cannot be acquired too early in the school life. These are "history" and "evidence."

"History" we will define for the purpose of this discussion as the story of human progress through the ages; while "evidence" may be defined as the means we have of knowing this story. As to the value of each, history gives us the idea of continuity, of race progress, helps us to see ourselves as links in an endless chain of human advancement. Evidence awakens interest, stimulates inquiry, and develops the scientific attitude of mind. Professor Johnson believes that the third year is none too early for children to begin their acquaintance with these two concepts.

Let us think of "citizenship" as meaning community cooperation—be that community large or small—leading the group life and working with our fellows. All are citizens and of various groups—home, school, church, shop, state. We all lead the group life and lead it all the time. We cannot escape it.

Keeping in mind this definition of citizenship, we may define American citizenship as sharing Uncle Sam's problems, both the responsibilities and the privileges. Perhaps it cannot be better described than by saying that it should embody this definition of patriotism:

> To be devoted to the best spiritual traditions of your own land, to be glad about them, to want to live up to them and be worthy of them, and

because of them to hope and work that the Republic may play an honorable part in the world's life—that is great patriotism. May it never end!

To this we may add: *That* is true American citizenship. May it strengthen with the years!

Our final term, "training," may be defined as the setting up of habits, skills, and ideals in some certain direction. To be effective, training must be continuous and cumulative, not intermittent and casual. It must be based on a sound knowledge of vital facts and principles.

We may now combine these terms and think of training for American citizenship as the fitting of our young citizens for the group life they are to lead in this democracy of ours. If this definition is accepted, we come to the final question as to the contribution history should make to this vital process of training for American citizenship.

If we accept the definition of citizenship as leading the group life, the contribution of history would seem to be to show how man has learned to lead this group life, to cooperate with his fellows. It must show us how the present has come from the past and can be understood only in the light of the past. This necessitates beginning where history begins with prehistoric man and ending where it ends. Truncated history would seem to have no place in this training process, whether it be ancient history, which is cut off and studied by itself, or modern history, which undergoes the same process. Nothing less than a world survey of the great epochs of human progress can give our high-school boys and girls a right perspective on the road over which the race has travelled from *then* to *now*.

Although this discussion is supposed to confine itself to history, it is not out of place to consider for a moment the contribution of social science. The two are really inseparable. Social science, a large part of which is civics, gives us a cross-section view of how man is today leading the group life, cooperating with his fellows. Combining the two we may say that history gives us the background of this story of progress, while social science gives us the foreground; or, in other words, history is the rootage, while social science is the flowering of the process.

In giving a concrete illustration of how history may be made to function in the ways already indicated, the writer must be pardoned if he makes use of the *Pennsylvania Course of Study,* for he knows most about that course of study.

Grades I and II are confined mainly to the stories of the Indians and Eskimos, the Eskimos for winter study and the Indians for spring and fall. Being civilized people, they mark a half-way point back to the study of early man which is taken in the third year. Moreover, these races lend themselves splendidly to expression work of various sorts—paper cutting, clay modeling, and the like.

In grade III the topic is Early Man—Tree Dwellers, Cave Dwellers, Sea People, Pastoral People. This is really the foundation year for the story of human progress which Professor Johnson has in mind. Moreover, whether we believe in the "culture-epoch theory" or not, there is no doubt that there is something in the children—partly imagination and partly social inheritance—which responds to the life of these primitive people. Of course, in all three of these grades the methods used are those of the story, the song, the game, and dramatization.

Grades IV and V mark rather an abrupt break in the story of man's progress, for the jump is made from prehistoric times to that of the early settlements in America. Grades IV and V are given over to stories of our own country's history. Care is taken that this work shall be neither consecutive history, on the one hand, for the children are not yet ready, nor formal biography, which would be equally uninteresting, on the other. The children are still in the hero-worshipping stage and will not reach the cause-and-effect stage until early adolescence, about the seventh grade.

In grade VI the usual European background plan is followed, which serves the double purpose of connecting grades III and IV and giving a setting for the United States history of grade VII. The course in European background is supposed to cover explorations and permanent settlements, and should be, like grades IV and V, a series of word pictures rather than either formal history or formal biography.

A good many students of this subject agree with Professor Johnson that the ideal would be to have no break in what should be a continuous story of human development. This would relegate European background to the fourth and fifth grades, reaching our own country's history at the sixth grade. There is hardly any question that this would be the preferable method if the history readers and source material generally now made available for the sixth grade were so simplified as to be useable a year or two earlier. Likely this is one of the advancements that will be made in the not distant future.

It will be noticed that, taking the elementary grades as a whole, the children have had a picture of man's growth from the primitive to the highly civilized; and the thought has been advanced that soon this picture will be an unbroken one. It will be shown later that in the secondary school the young people will be given another world survey.

Important as the history is in citizenship training for little folk, it would be incomplete without parallel work in civics. This is provided for in the Pennsylvania program, first, by training the youngsters in civic habits—obedience, courtesy, helpfulness, orderliness, truthfulness, honesty, fair play, courage, self-control, thrift, and the like. This is done through stories, poems, songs, games, memory gems, pictures, and dramatization of stories told by the teacher. Of course, this must be supplemented by the careful follow-up work of the teacher. After this habit training has been going on for two or three years, it is supplemented during the remainder of the elementary course by stories of the community service rendered by those who are furnishing food, clothing, shelter, recreation, protection, and the like. The hope here is to have the young citizens come to realize the service that is being rendered; how dependent they are on this service; how interdependent people are; and how this interdependence is made possible by the wonderful cooperation that prevails. Finally, we want them to appreciate the all important fact that in rendering this service, adults must exemplify the same civic qualities as those in which they are being trained.

We are asking that three periods of history and two periods of

civics shall run side by side throughout the first six grades. Throughout the junior and senior high schools, as we see it, all courses of study should be finished by the end of a school year. There are various reasons for this. Accordingly, the social-studies program calls for United States history, grade VII; community civics, grade VIII; vocational-economic civics, grade IX; world survey, grade X; American history, grade XI, problems of democracy, grade XII. It will be noticed that this gives an even balance between history and social science—three years of each. We feel that this is far better than the older plan of a "continuous performance" of history only.

Without going into detail, it may be said that the United States history of the seventh year should be consecutive, concrete, dramatic, and ethical. These terms are so self-evident that no further comment would seem to be needed.

Now follow two years of civics. In the eighth grade the young people, who have now rached the cause-and-effect, gang-spirit (cooperative) stage, learn for the first time how the various elements of civic welfare, such as, health, protection of life and property, education, and recreation, are secured through the agency of public and private organizations. The order of procedure is from function or activity, which touches the lives of the young people, to organization, and then to legal powers. This last takes them back to federal or state constitution, or to the city charter.

The vocational-economic civics of the ninth year consists first of a study of the various occupations into which young people may go—the nature of the occupation, chances for advancement, personal and educational qualifications necessary, the business ethics involved, and the civic service to be rendered. The second part of this course is a study of those economic and social institutions which correspond to the vocations studied in the first half-year. For example, in the vocational civics under the subject farming the pupils will discover the various kinds of farming that are possible, while in the second half-year they will study the farm as a fundamental social and economic institution; and so with the other vocations.

The preceding years of history and civics have prepared the public fairly well for the world survey of the tenth year. Such a survey is found to be perfectly feasible and worth while if taken by epochs. Any attempt to go into minute detail as to all the facts in history that can be got inside a textbook would make impossible such a course as we have in mind. If, on the other hand, the whole span of history is divided into not more than ten main epochs, the outstanding movements and events of each epoch can be studied in some detail and time can be found for the use of interesting source material. Committee reports and class discussions can then form, as they should, a large part of the work of the class. It will be seen that this course in world survey must be comprehensive, selective, and epochal in character. Making this course highly selective makes possible that it shall be also thoroughly comprehensive. The two terms thus go together, and are not mutually exclusive as one might think.

In grade XI a more advanced course in American history is given. This course is expected to be topical-chronological in character and Pan-American in scope. Many of the ethical stories that find a place in the United States history of the seventh year can be profitably omitted in the eleventh year. Moreover, those topics that are taken up should be treated very differently from the way they are handled in the junior high school. For example, under the topic slavery in the seventh year the reports and discussions would center around the tribal wars in Africa that made possible the supply of slaves; the horrors of the slave ships; slave life in the border states as contrasted with that further south; and brief notice of the various compromises and other events that led up to the Civil war. John Brown's raid would have an important place in the seventh year, but only a mention in the eleventh year. In the senior high-school American history, slavery would mean a careful discussion of the various compromises; an analysis of the Dred Scott Decision; and a tracing of the change in the point of view in the South from the days when slavery was considered an evil, that would soon be ended, to the time just before the Civil War when slavery had come to be regarded as a divine institution, and the conviction was expressed that the Negro

had no soul. If the history in these two years is differentiated as here indicated, there can be no possible conflict between the two nor loss of time in studying American history twice.

There only remains to be added that the problems-of-democracy course of the twelfth year is regarded as the culminating course in a twelve-year program in citizenship training through the social studies. We believe, as has so well been stated in the Report of the National Education Association for 1916, that young people face problems and not sciences; but that they must go to the sciences for explanations and possible solutions of the problems. Accordingly, our twelfth-year young people make a fair beginning with the problems of the day. To accomplish this, they must make use of high-school textbooks in economics, political science, and sociology, together with special works that are not too difficult, and with current magazine literature. Our fundamental purpose in this course is to train our young people to investigate, to reason, to judge, and to make every possible use of the powers thus acquired. As a by-product of this course we are finding that an excellent foundation is being laid in the social sciences. This will be valuable whether our high-school graduates go on to college or go out into the business world.

Just a wor dabout the classroom and the teacher. If there is one word that needs retiring on a pension it is the word "recitation" as applied to our classroom. Recitation room at once brings before the mind's eye a room filled with uncomfortable seats all carefully nailed to the floor in relentless straight lines. Obviously the only purpose of the nailed-to-the-floor seat is to recite-to-the-teacher. If we change this title and talk about a work-room or laboratory, at once the scene changes. Now we vision a room equipped with movable furniture, grouped in every conceivable fashion according to the use that is to be made of it. And this room will be adequately equipped with *book-laboratory* material—source books, maps, charts, bulletins, government documents and reports, pictures, stereographs, slides.

This will mean that some days the entire period will be a laboratory period, where the teacher is going from one committee or group to another advising with each in the preparation

of its class report. On the following day, when various reports are presented and discussed, the chairs may be grouped in some fashion so that the pupils are facing each other for that informal give-and-take, under the skilled guidance of the teacher, that makes for real education.

When shall our practice catch up with our theory? We know perfectly well that the educative process is not going on at all unless there is genuine interest on the part of the pupils, this interest being engendered and stimulated by active cooperation on their part; and no sane teacher would claim that the formal recitation was real cooperation. Too long have we put undue emphasis upon individual performance to the neglect of group cooperation. Surely the social studies should lead the way in the socializing of the class period.

Needless to say, the teacher who conducts this sort of work adequately must be well trained in both content and method. Neither will suffice alone. The two must be blended in the training of our teachers. Fortunately, this is coming to be well understood by the schools and departments of education of our colleges and universities as well as by the normal schools.

A twelve-year program of citizenship training through the social studies would seem to be second in importance only to a similar program in health and English. The three together ought to go far toward meeting the accusation so long directed against our schools, that they are not adequately equipping our junior citizens for the responsibilities of American citizenship.

THE NATURE AND FUNCTION OF SOCIAL MATERIAL IN THE ELEMENTARY SCHOOL

MAUDE L. RUPEL
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The most important social contribution that the typical citizen can make is to function normally in the ordinary relations of everyday life, in the family, in his work, as a neighbor, at the booth of election day, in support of the school and church, and with respect to the moral code. If all citizens could be depended upon to do these ordinary things effectively, our social problems would largely take care of themselves. To that end it

seems wise to explain the fundamental social institutions and show young people clearly how much they can contribute to the general welfare by merely taking their normal parts therein and how much harm they would do by any breach or neglect of such relationships.[1]

One of the hopeful signs of the times is the tendency to think of the school as a laboratory where under the control and guidance of a teacher the student may have opportunity to experience desirable activities, in conditions as nearly normal as it is possible to make them. Under such a system the student leaves school not so much girded and prepared to meet new and strange circumstances as long experienced in the activities which he must continue to perform under only slightly varying conditions. He faces life with an understanding mind and an intelligent attitude towards whatever he may encounter.

In our course of study in the Dayton schools we regard social science as a body of material through which the student may acquire an understanding of the world in which he lives. It affords a series of experiences, real and vicarious, through which he may gain a sense of other people, a familiarity with those functions which he must perform as a member of the society of which he is a part.

Because of the wide and varied scope of such material and the limitations of time, we have combined our history, geography, and civics into a single course which we call social science. In some grades this subject is predominantly geography, in some history. We always study the people, the influences which have made them what they are, their relation to their natural environment, their interdependence. The children learn that there are many industrial groups in the world, that each has his part in the whole and that each is dependent upon some of the others, that the welfare of all is dependent upon the welfare of each. They learn that territorial groups, nations differing in language, customs, traditions, and institutions but having similar needs are interdependent for material needs and general welfare.

In the fifth grade we study Asia, Africa, and Australia. We

[1]Finney, Ross L. "What Do We Mean by Community Civics and Problems of Democracy?" *School Review*, 32: 521-28, September, 1924.

study the ancient civilization, primitive races, tribal governments, nomadic life, and despotic rule. We teach that here were the beginnings of many things; systems of writing, religions, and sciences. We encourage the children to read *Arabian Nights Tales,* Bible stories, and stories of China and Japan, in fact any thing which will give them a real sense of the people of this portion of the world, past and present, and an appreciation of their own by comparison. We follow this plan in each grade, aiming not at chronological sequence in history but at the story interest, trying to make clear the meaning and influence of events and institutions upon the people as well as the natural conditions. We try to give in brief a survey of civilization and an understanding of the world in which we live.

Two aspects of this work are very important, the wide reading by the children and the adequate expression of what they read. We are trying to get together a body of material which will carry its own interest, which the children will read with absorption and interest not only at the request of the teacher but during their own free time.

To help the children retain what they read we teach them to organize much of the material. The outlines are crude at first but improve surprisingly from year to year. We train the children to stand before the class and tell what they have read, to give and take criticism. To know the subject well is to be able to express it well. There should be much telling of stories read and experiences gained both orally and in writing. There should be class periods in which the teacher talks, explains, directs, motivates; there should be periods in which the students read without interruption; and there should be periods in which the students tell of what they have read. Such periods should not be used to test the students' knowledge but should be looked upon as opportunities for expression.

The good citizen, among other things, should have an active interest in men and affairs, he should read widely, he should weigh and consider what he reads, he should evaluate material and authorities, he should base his opinions upon wide knowledge, he should be able to organize facts, to make what he knows help him

to grasp other things he wishes to know, to think straight, to talk convincingly and clearly about the things which concern him and his fellows. Social science presents the best opportunity for such training; the elementary grades present the place where such training should begin.

THE PLACE OF HISTORY IN THE TRAINING FOR CITIZENSHIP FROM THE STANDPOINT OF THE JUNIOR HIGH SCHOOL

Bertha E. Jacobs
North High School, Columbus

Any discussion of the place of history in the training for citizenship needs to be prefaced by a definition of the term citizen, in order that those interested may have a standard by which to measure. Suppose we accept the one that has been suggested, and say that an ideal citizen is an informed, responsible, and conscientious member of the group in which he finds himself. Our group-discussion problem is then simplified. What will the study of history do to produce such citizens for the state? My own problem is simply a limitation of that. What has junior high-school history to contribute to such training?

History, as such, has not held a secure place in our schools for any great length of time, and the present tendency seems to be toward less security, rather than greater stability. This is partly due to a widespread present-day interest in something called the social sciences. The result has been the reducing of history to a sort of hand-maiden position, and we are urged to teach history for the sake of patriotism, history as a setting for civics, history to give fluency of expression, and history to give vitality to geography—in fact, history for almost any reason save its own inherent value. History for history's sake is in many places not at all the fashion.

The junior high-school history teacher as she faces her classes is keenly aware of the ideal of citizenship toward which she wishes to work, and is also keenly aware of the fact that these boys and girls on the edge of adolescence present peculiar problems in

the attempt to work toward any ideal. Her students are just entering the world of the grown-ups, and the outstanding law of their being seems to incline them to accept the standards and adopt for their own, those which they find in operation in this new sphere of experience.

Where else but in history may the teacher find the material these children need? What other subject will give the wide view of life that is essential? If history is allowed to speak for itself, the pupil as he sees the long, long story unfold, will learn that today is the result of yesterday, and in its turn is the cause of tomorrow. As he learns to look for evidence for the forming of his conclusions, as he sees in the life of nations the lesson repeated that as a man soweth so shall he also reap, as he follows the growth of institutions and the development of society, he is learning history, but with it he is getting invaluable by-products.

He may be brought to understand, in a measure, that the society in which he lives may be the latest, but is not the final stage of growth. He may be brought to see himself as a responsible unit in the society of which he is a part; and he may glimpse an ideal of a more perfect relationship of mankind. With that vision there should come a conviction that while much has been done for man's progress, more can be done, and in the doing each must play his part. And so understanding, and so seeing, and so dreaming, our pupil will not be far from the ideal citizen—an informed, responsible, conscientious, and idealistic member of his group.

THE PLACE OF HISTORY IN THE TEACHING OF CITIZENSHIP FROM THE STANDPOINT OF THE SENIOR HIGH SCHOOL

Donnal V. Smith
Principal, High School, Delta

Since the early nineties educators have been studying and investigating the place of history in the curriculum of the high school. The results of their investigations have given history an undisputable position and attributed to it a great many values.

One of these is citizenship. This particular value has, until recently, been practically unchallenged, but with the more or less chaotic state which follows every great war, there has risen a new group among the educators who are saying that the efforts of the past years have all been mistaken. They maintain that history does not, as we supposed, have among its aims the teaching of citizenship. This new group of educators is offering in the place of history a whole variety of subjects such as civics, sociology, social problems, vocational problems, problems of democracy, and a great many others. This new group of educators is advising the wide adoption of these new courses and the abandonment, in a measure at least, of the history course, which, for more than a quarter of a century, has been scientifically studied and investigated.

Since these courses are being recommended to the high-school teachers of Ohio, it might be well briefly to give them a thought. The first thing to notice is their aim. In a number of textbooks examined recently not one set forth a definite aim which it hoped to accomplish, and a great many went so far as to state that they were not sure of the ground on which they stood. But the author offered his text until something better could be devised. In other words, nothing against history as a teacher of citizenship has been pointed out, much less proven, while nothing definite in the way of aims can be claimed for the new courses offered instead of history. The proposed change has come so quickly that it is nothing less than a revolution. The whole perspective of history militates against this sort of thing. Science demands the sanely evolutionary change so that each step is known to be in the right direction.

History, due to the labors of the past thirty-five years, has assumed the proportions of a science, while the new courses, springing up as they do almost overnight, can make no such claim. Each one of them must have its own particular historical background which is to be hauled out of its true historical development and taught in such a fashion that scientific history will be practically eliminated. When that comes there will be a serious situation in

the social sciences for no one will know or understand what he is trying to do.

This whole condition puts a serious problem before those interested in history in the high school, namely, shall the high-school teacher advocate the abandonment of history, a course which has been tried and tested in a scientific fashion for the past thirty-five years without revealing any serious and permanent defects? Shall the high-school teacher advocate the adoption of the great number of so-called social-science courses which have no clear, definite aim, which have no uniformity, which do not permit scientific teaching? Or shall the high-school teacher demand that these new social sciences be as carefully investigated and as well planned as the history courses before the change? If scientific history means anything at all, it means that we must go slowly in these changes, that we must investigate so that we will be sanely evolutionary in our program.

THE PLACE OF HISTORY IN THE TRAINING FOR CITIZENSHIP FROM THE STANDPOINT OF THE NORMAL SCHOOL

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There are three fundamental things which must be considered in discussing the place of history in the training for American citizenship from the standpoint of the normal college.

What will the teacher be required to do in the public school? In the presentation of the work Dr. Barnard has indicated not only what the public has been expecting of the teacher but, under the new scope of teaching, what the teacher will be required to do to meet the new situation. Stating these things briefly the following seem to be clearly among the demands:

1. Primary teachers must teach history stories and simple civic lessons.
2. Intermediate teachers must teach the origins of the American nation and the somewhat more complex problems of civics.
3. The junior high-school group of teachers must teach organized American history and civics.
4. The senior high-school group of teachers must teach not only

American and European history but many of the other social sciences as well.

The second fundamental consideration which must be kept in mind in this discussion is, What must the teacher know? There are at least two distinct groups of things which the teacher must know:

1. The content material of the branches taught, namely, history, political science, sociology, and economics.
2. The method of presentation of the material which of course includes the handling and preparation of material.

The third thing which must be given consideration is, What must the normal college do for the teacher in preparing him for his work? The following seem to be pertinent to this preparation:

1. The normal college must try to develop a citizen with the essentials of citizenship and the attitudes of a citizen.
2. The normal college must give deep, full, and abiding scholarship. Scholarship must have a place in the normal college.
3. The normal college must give technical training to delevop skill in methods.

Expanding on some of the above in a typical way and by way of illustration, it is clearly seen that the elementary-primary group of teachers must learn more than they expect to teach. So must all of the teachers for that matter. Too often there is prevalent among the elementary teachers especially the notion that their study in the normal college must deal only with that material which they expect to use in the classroom. Teaching the stories of Roger Williams, Daniel Boone, Andrew Jackson is easy compared to determining why they should be taught at all. For the teacher who teaches them there are the following things to be kept in mind:

1. What particular thing or things does each one exemplify?
2. What elements enter into the preparation of the story? It is not sufficient merely to tell a story but a *history* story must be told. What particular things must be present in the story?
3. The entire atmosphere and content of these stories will be determined by the sound historical content material concerning these men and their times.

Attitudes and not so much *information* will remain with the children. Hence the extreme importance of the teachers' having the right attitudes in these things which must demand scholarship

in historical content. Thus will be determined the attitudes of the future citizens toward England, France, Greece, and others. Present-day observations reveal the necessity of care in this matter.

So one might specify in the other groups of teachers. The intermediate group which must deal with Greek and Roman stories must certainly know the Greek and Roman history back of them. Conditions in Europe must be known in order to explain *why* people came from them and *what* they brought with them. Railroad consolidation in the present day under the Esch-Cummins Act of 1920 must be understood and thus throw light on regulation, control, and ownership of railroads. Without further discussion the enumeration of the following things suggest the problem of the normal college:

1. Direct study of the things to be taught in the public schools is not always the shortest, surest, or safest way.

2. Modification of the present course of study in the social sciences does not necessarily mean elimination for the teacher in preparation; it may mean addition.

3. History is the basis of all the social sciences. Out of history came the various branches of sociology, economics, etc.

4. The strength and influence of the various associations of sociology, political science, etc. have an influence on the present attempted modifications.

5. Elementary teachers must have more training in the social sciences, because the present amount is already too small to teach the things now required and additional requirements of things to be taught as indicated by the present tendencies will necessitate additional training.

6. Three years should be the minimum of training for the junior high-school teachers with a strong suggestion for four years.

7. All elementary teachers should be required to have at least three hours of European history in their course in the normal college. This European history should not be of the usual type but of a peculiar type to fit the elementary teacher for her special work.

All this means that the demands for more definite training of

children for American citizenship will have its answer so far as the normal college is concerned in the broadening of the type of history and other social sciences in the normal college instead of narrowing the training down to training in some such text as community civics or problems of American democracy.

THE PLACE OF HISTORY IN THE TRAINING FOR CITIZENSHIP FROM THE STANDPOINT OF SCIENTIFIC HISTORY

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Ohio State University

Professor Knight has said that scientific history is nothing more than truthful history, that is, history based on actual evidence. During the last twenty years there has been a great improvement in history textbooks in the way of correct narrative of events and explanation of movements. The writers of our best texts are scholars who apply the rules of evidence in their writing, and who use carefully selected pictures of authentic buildings and portraits, in illustrating their books. More and more our teachers are persons who have had some training in critical or scientific historical methods.

Even in the higher primary grades the children can readily be taught the principles underlying scientific history. At home they learn the importance of truthfulness. A mother questions her children to find out who committed some misdeed, and may gather further evidence from the children of her neighbors. She is getting independent testimony in order that she may discover the wrong-doer. In a court of law witnesses are called to give evidence. A single witness will not suffice. There must be two or more independent witnesses in order to establish a fact. Children understand this process, and need only to learn that the same rules apply in establishing the truth of statements in history. The whole matter is simple in so far as the fundamental principles are concerned. In the teaching and study of history in the high school, the college, and the graduate school the same principles are valid.

The explorations of historical scholars in Egypt, Crete, Mesopotamia, North Africa, and South America are constantly bringing to light new materials for study. A mass of cumulative evidence which is revealed in the ruins of ancient cities, and not infrequently in the form of written records in hieroglyphic characters, papyri, and cuneiform inscriptions, when interpreted by specialists, adds to our knowledge of the past civilizations of those regions. In similar manner the researches of historical inquirers, among the original documents to be found in government archives and in collections of printed material relating to later times, throw new light on man's activities in the more modern periods.

This is quite familiar to all of us teachers of history, and we know that only by means of history can we understand the present. History illumines the pathway of mankind, but it must be truthful, that is, scientific history. The principles that underlie such history are the principles that must be observed in the right conduct of society and government. No other than scientific history can be trusted to show us how the problems of the past have been solved, and how our present problems have arisen. As a teacher of history for many years past I may be prejudiced, but I freely confess that I know of no other subject in the curriculum of our schools and colleges so admirable for training in American citizenship as history, with which, of course, I would include civics, since civics should be taught with history in order to bring both into their proper relations and to make clear and forceful the lessons of each.

HOME ECONOMICS

Ida Patterson, *Ohio State University,* Presiding

THE FIRST LESSON IN DEMOCRACY

Mary E. Sweeney
Merrill-Palmer School, Detroit

It is always a great pleasure to me to talk on the subject of childhood, because that is the subject I care most to discuss. I never come before an audience but I feel again the same sort of trepidation I felt once during the war when I was trying to talk on food conservation to a group of colored people in Lexington. No one had been quite brave enough to undertake the task. After a while they came to me, and I promised to speak to them. The colored parson who was presiding, was much embarrassed when I came in. There was no reason, but he was, and he said, "Let us pray." I have found since that that is a good thing to do when you are embarrassed. He said, "O, Lord, you know what a hard time we had getting a speaker, anyway. And now, Lord, we do thank you for sending this lady with entitlements. (He meant a college education.) Now she is here, Lord, and you have seen her coming. Would you be kind enough to let her say something. O, Lord, if it is all the same to you, can she please have a message?" I never come, like this, to speak to any group of people, but that I feel I have no right to take up your time and mine, without learning something from you and without each of us aiding the other, and exchanging mutual experiences.

Much of the talk about democracy is trite, but the more we think of democracy the more we know how much it means to us. There are certain empirical things about democracy that we are beginning to tell ourselves all over again. We say that a democracy is just as stable as its citizens; that citizens are just as stable as their home life; that the progress of democracy depends first of all upon the careful training, the clear thinking, and the intelligence of the great mass of people; and that the problems of democracy are the problems of the youth of any land. I need

not tell you that a wide demonstration of this fact was given in the last War, when the fate of all that we believed in was held in the hands of the youth of every nation, for the war was won by the character, the conduct, and the ideals of the men between eighteen and thirty. It was on them that the large responsibility of championing the cause of their country fell.

Most of the world is beginning to believe, and science already is saying in no uncertain terms, that all of us are made physically, mentally, and socially before we are six. Every time we think of that we know again that the roots of democracy penetrate back into the life of the young child and into the institution in the nation's life known as the American home. So after all, democracies are made or unmade in the first six years of life. Democracies are built by the will of people, for people. They are founded fundamentally on the principle of justice to all, personal honesty, honor, and personal responsibility. Without these characteristics in the individual and in the mass we cannot have the ideals of democracy.

Where do children get their first lessons in justice, in honesty, in honor, in personal responsibility? They get their first lessons at home, and they are taught first by their parents. Think back into your own life, where and when did you learn that this was right and that was wrong, that this was fair and that was unfair, that this was true and that was untrue? Who taught you those lessons?

I wonder if you realize that children have to be taught what the words "Yes" and "No" mean. The child's first acquaintance with authority is with the authority in his own home. And it is the character of that authority which sometimes, if not always, determines his childhood attitudes, his later attitudes in life. The modification of these may come later from experience, but for the most part the child's attitudes are fairly well crystallized towards authority before he is six.

There is nothing in childhood so important as fundamental honesty, fundamental truthfulness, and fundamental courage to face facts. The most profound influence that can be exerted upon a child is the atmosphere of the adults about him. I think this

generation of older people is much given to questioning the attitudes of the adolescent boy and girl and of the college man and woman of today. I wonder whose fault it is?

Did you ever hear anybody tell a child that there was no more candy when there was a boxful on the table? Did you ever hear anybody say that they couldn't open the desk drawer when they could? Did you ever hear a mother tell a child that she was going to punish him when she knew and the child knew that she was not going to do it? Do you believe you can tell a child a lie and expect him to follow you and tell the truth? Do you realize the children's attitudes, aspects, and standards are being constantly formed by the atmosphere of the adults with whom they are associated and in whose presence they are?

I was much impressed with this not long ago when I went into the home of a friend whom I respect highly and inquired of the little boy, who was about three, "Is mother home?" He replied, "I don't know whether she is or not. She just told another woman that she was not." When I went in, she said to me, "What is the matter?" I said, "I want to know how you expect your son to tell the truth when you lied to him just three or four minutes ago." "You are very disagreeable this afternoon," she said. I said, "I mean to be. How can you expect him to follow you with the truth if you lie to him about being away when you are here?"

We often think that children of three and two are just little growing plants. That is a mistake. A child of two has a well-defined personality. He is able to think and plan and understand. I become angry sometimes, with the attitude of adults towards the young child.

A story will illustrate fairly well what I want you to see. Not very long ago we wished to weigh and measure a child who was just entering the school so that we might later find out whether he was growing normally and developing as he should. We took him into the doctor's office where the weighing and measuring were done. He went into a violent fit of weeping, but our procedure was not to hold him and undress him, to put him down on the floor, and kneel on his chest. Instead, one of the teachers came in and explained to him that this was the place where we

found out how much little children grew and where they grew. And she showed him the apparatus and explained to him that there was a little boy who was being weighed, and he had grown so much during the last month. If he wanted to know whether he was growing, this was our way of finding out. There was no further trouble.

Somebody nearby said, "I didn't know that children two years old could understand like that." The world generally does not seem to think that children have the ability to understand. I find that most of the difficulty we have in removing children's clothes is, because they have usually been punished by having their clothes taken off and by being put to bed. The first procedure in this matter of punishment is to take their clothes off. After we explain to them that we are going to measure them to see how they grow, we have no difficulty at all.

I wonder if parents really face the facts with children? I wonder if we say, "We can or we can't do this under the law?" I wonder if we say, "We can or we can't afford this?" I wonder if we say to the child, "This is right" or "This is wrong"? I wonder if it is not necessary in all our dealings with children, because they are being molded, first of all to deal in terms of honesty and truthfulness? Because if we don't, the result in children is a distrust of belief and a vague idea of what truth is anyway.

There is such a twilight zone built up in the child's mind about what is right and what is wrong, what is true and what is untrue, that we constantly have difficulty in getting back to fundamental principles that people must face if they are to live in a democracy and be a part of a democracy. If the home fails in the first lesson, what agency is to teach and to conduct the child, to straighten out his thinking after he has gone into other social institutions, such as the school?

I think no one who reads the newspapers or magazines today can fail to realize how terrified and aghast the world at large is over the problem of its youth. I wonder how many of you saw that report that was published by the International Reform Bureau under the signature of its Secretary, stating that for every

adult in this country who was a criminal there were seven minors? I wonder how many of you read the report of the commercial detective agencies that protect stores and banks and all kinds of commercial concerns. Did you read their last report that said that three-fourths of all the robberies of last year were committed by youths under twenty-one? I wonder how many of you are following the moral delinquency that is being reported through the juvenile courts? I wonder if you catch the pulse of the world's thinking and interpret this concern as meaning that these facts strike at the very foundation of democracy? Because the permanency of democracy depends first on the individual's attitude towards authority and towards property, and on the social development of the individual and the group. When we see in young children the beginnings of social and moral delinquencies, which become exaggerated in the adolescent and become crime in the adult, we realize that probably the most important thing before the world today is the attitude of young childhood toward authority.

Where does the child first encounter authority? In its home. The first interpretation, the first crystallized idea of authority comes to the child from its parents. The attitude of youth toward parents, towards teachers, towards traffic officers, towards employers, towards the state, towards the national authority, is a reflection of that first idea of authority which the child received in his home.

I wonder if we can understand some of that, because the more I talk to mothers, the more they say, "Well, that is not a matter of authority; it is a matter of contrariness on Johnny's part." They say, "Johnny isn't resisting my authority. He is just contrary." I think parents should begin to realize that the twilight zone where contrariness ends and the development of the child begins is very narrow. Most children between two and four are contrary. It is a development of their sense of personality.

If you treat it unwisely and handle it uncomprehendingly, you get a habit of resistance to authority that produces the negative child who says, "I won't" to everything. I think you must have met some such children in your life. I met one the other day,

who during a period from nine o'clock till four made but one remark that whole day through, and that was, "I won't." It happened to be the child of a college professor, and it was not between two and four either. No doubt it was largely a case of maltreatment of a child with regard to its sense of personality.

But we do find that there are well-trained, thoroughly devoted parents who insist upon absolute obedience on every small point, as well as over fundamental principles. And we find the child trying to assert its human rights. Parents interpret this as contrariness. We find that the same child later passes a "Stop" sign on the traffic policeman's semaphore. We find in society everywhere, that the child whose human rights have been violated by a lack of understanding resists authority, and so we have that fundamental principle of democracy interfered with, the appreciation of authority.

Then you meet the child that we all meet, the child who loves to argue. I think probably this is the most common type of unsocial child, the one who has all the pros and cons of the situation discussed before him and takes a part in the argument. The probable reason is that by creating a lively family row, he gets his own way. He finds it an effective method. I meet that same type of man in political conventions and that same type of woman in women's clubs and women's organizations. I meet them in school boards and among teachers. You have met them also. Some of the undergraduate women have met them in sororities. Some of the other women have met them in churches, the person who gets his way by creating a disturbance, who enjoys an argument, and eventually wins out by precipitating some sort of row. It began usually before they were five as resistance to authority. Through these uncomprehending ways of handling the problem of the attitude of the child towards authority, you get a child who resists social progress, who resists educational progress.

Sooner or later he becomes negative to almost every issue, and finally you find him in the growing class of those that are socially rebellious. It is the attitude towards authority which has been violated in the early days of life, and which is a real danger to democracy. Usually the more dynamic the personality of the

child, the more rebellious he is. I hope I bring the idea clearly before you, that the attitude of the youth of today towards authority is one of the results of our lack of development along certain lines of research, investigation, and study.

Then we have the other attitude, the attitude towards property, that is acquired very early. We used to think that children did not need any property. All they needed to do was to sleep and to eat. But we are finding the world over that children reflect the attitude towards public property, towards private property, towards the possessions of others, which was the attitude towards property manifested in their own homes.

You perhaps have had the opportunity of observing children who did not know when property was their's and when somebody else's. I have had children in my own home who ran around and grabbed anything that was in sight and appropriated it. It doesn't matter whether it is your best piece of cloisonné or the butcher knife in the kitchen. It is a question of having no sense of personal property. I have known girls in college who appropriated other girls' clothes without asking. I have known some boys in college who appropriated other boys' cars without mentioning the fact to the owner. I have known some of these people to go out in the world and continue the practice of appropriating cars.

I followed one case, that of a young lad, to the court. His explanation to the judge of the juvenile court was, "Well, now, that fellow didn't need that Ford, and I wanted to take my girl riding, and I didn't see any reason why I couldn't use the Ford when he didn't need it." He did not know the man, but there was an empty Ford.

I think we do not generally understand that children before they are two, begin to get a sense of possession. They must be taught the right attitude towards property and towards possession. Later if we find it in society, in public life, in all the organizations to which we may belong, we must go back to this beginning and find out first what was the training regarding property given in his own home. Many times it not only reflects the attitude towards property, but the correct use of property.

There was a little child that came to the school out of an institution, a children's home, who had been adopted. He had never had any use of any kind of tableware except a spoon. When he was first presented with a fork, he had no idea what a fork was for, so he used it to spear his next-door neighbor. He thought it was a weapon of defense. His acquaintance and his experience were limited to a spoon. Children have to learn the use of things. It took us a long time to teach him how to use a fork. He always reverted to his spoon, because that was the first thing that he knew, the thing that he had experience with.

For a short time of my life, I had some experience with renting houses. I realize now that the public generally does not know the correct use of property. I realize now that all the world does not know and does not understand how to use all the sanitary conveniences that modern ingenuity has given to our present-day life. I realize that people do not mind where they drive nails. I realize that this thing of the right use of property is one of the most tremendous impulses that comes into people's lives.

During the time of the big prices for tobacco, into one of the finest ready-to-wear stores in Lexington there came a young girl of about sixteen with a fascinator over her head, and she wished to look at some plush coats. Everybody but this girl knew that plush coats had entirely vanished from the face of the earth twenty years ago. But she didn't. She asked for a plush coat. The tactful saleswoman said, "We haven't any plush coats. Maybe we can show you something better." She did show her something better, then something still better, until after a while the girl chose the most expensive fur coat in the whole establishment. It was a coat that had been the envy of every well-dressed woman in the city when it was on display in the window. She said, "I'll take that." The saleswoman said, "Don't you think you had better ask your mother?" The girl said, "Pap said if tobacco went up to a dollar a pound, I could have anything I want." With that she reached into her stocking, took out $700 and handed it to the astonished saleswoman. With a fascinator on her head and the most expensive coat in Lexington on her back, she went out into the street.

I think we are beginning to realize the world over that there is a great deal of difference in the way people use property. I was told this story by a friend of mine when we were discussing the correct use of property. He said he had known a man who wished to express his appreciation to his wife, so he gave her a sealskin coat. His wife didn't particularly understand and care about the coat of sealskin. She wore it the first season when she went out. Next season the kitchens of their apartments happened to be opposite. He said he looked over one night, and the lady was in the kitchen frying onions in her sealskin coat. She had used that piece of property in a way that most women would hardly have used it. I scarcely feel that a sealskin coat is quite the proper garment to fry onions in, unless you wish to advertise. The fact of the matter is that people generally do not know how to use property rightly, but the right use of money must bring the right use of property.

I think we begin to realize, too, that children have certain desires and certain human rights that are perfectly legitimate. I wonder how many times people in their adult life some day satisfy a longing that they had since they were children of five. It is amazing, the complex of conditions that one finds in human homes, and how easy it is to relieve some of them.

A little child came into a group who would take things out of other children's lockers. We have heard of people like that. He would hide these things away in his own locker. The child was studied for a long time, and then one day an instructor went with him to his locker, and said, "Isn't this John's toy?" "Yes." "You took it out of John's locker?" "Yes." "Would you like to give it back to John?" "Yes," he said with the most wonderful smile. The instructor went home with him and discovered that every toy he had was locked up the minute he finished playing with it, that all of his clothes were locked up, and his grandmother carried the key. There was nothing in the world that the child possessed that he could really have and get when he wanted it.

There are certain human rights that children have a right to expect will be respected. When those rights have been overridden, the children present problems in society with which we do

not know how to cope. We have to go back again to those years when they were being taught the right attitude toward their own human rights.

Another important factor in a democracy is social development. We do not generally consider that children begin to develop socially until they become adolescent. Actually, social development begins between two and three; all the strong social interests and instincts appear at about that age, and the group is the place for social training.

Cooperative play begins at three. The child who always is denied comradeship often fails to develop socially and later becomes a difficult social problem. We learn to play the game at three, not at thirty. We learn to play the game as a part of a social group, when we are little children. The social atmosphere that is created by a group is one of the most tremendous influences which arise in a young child's life. The interesting thing to us is that so many of the difficulties which we as adults fail to overcome in the child may be accomplished by the members of his group.

A little child came to us recently whose eating had been a very serious problem. She ate by herself. She did not sit down at the table with her mother and father at any time. If any of you have ever lived in a boarding house or a hotel and have been the only person at the table, you know that the loneliest thing in the world is to eat by yourself. This child had food that was good for her and was told to eat it without any companionship. The group of children with whom she ate soon brought about a very marked change, because when she saw other children eating the same food that she was served, she wanted it, too. One of her most interesting comments to her mother was, "O, mother, the teachers eat the same food that I do."

I think we do not quite realize how many times a group of children can do more for a child than a single adult. We had a little child who was a special problem, who would not do what was good for her. She was one of the younger children. One day an older child, by which I mean three years old, said to this one, "Now, Betty Ann, if you will eat your dinner, I will let you serve

me today." With that, Betty Ann dashed to the table and set it for this little person of three, brought her own dinner, and ate it. The older child said, "Now you may remove the dishes." She removed the dishes, and washed them very willingly. From that hour on, there was no further discipline needed. The crowd, the social group, the cooperative play spirit had done for the small girl what the group of well-meaning adults had not been able to do.

Now, I know you at once get into your mind the question of whether this is a case of environment or heredity. I do not know that anybody is yet quite able to say. But we do know that certain types of environment will bring about certain types of behavior. I never knew just what this meant until I realized that at five you had to pass on because you were too old. I realized it the other day when I was trying to make three-year-old conversation, and found myself inadequate; I realized it was too far a climb downhill. This little girl looked up at me after I had made several efforts at conversation, and said, "You are one of the old ladies, aren't you?" Age had never sat so heavily upon me as it did at that moment.

In our group we have children who are peculiar cases. A certain child who came to us at three, was eager and capable. She enjoyed everything. She suggested all the songs and was always ready to tell any story that the teacher could tell. The funny thing was that she told it just as well as the teacher. She could play the leading part in any of the games. She could play whether she was called on to play or not. She would say at a quarter of eleven it was time to go out to play, and you would look at the clock and see that it was. She would tell all the children how to eat and where to sit at the tables. She was one of those children that had been made by her environment. She had this type of behavior, because the first seven months she was just barely kept alive. The doctor said her hope of life depended on not irritating her and on allowing her her way in everything. In these first seven months she got the idea that the world existed in order to fulfill her requests. Her parents were liberal, and they quite adored her. But with all the resources at our command, we could not break a habit formed in the first seven months of her life. She went out

from us, still telling us that it was time to play, still telling us that it was time for lunch. Her attitude towards life was built up in her first seven months. I suppose she will go on managing colleges and managing people at home and in society in much the same way that she managed, or tried to manage, our school.

The opposite training showed in the case of a little lad, who stood on the outskirts of all the play groups, who did not want to participate in anything. Ever since he was tiny, he had had dinned into his ears, "Don't do that. What will people think of you?" "What will people think of you?" had been said to him so often he didn't dare do anything. He would not play, because he was so self-conscious that it was almost impossible to get him to participate in anything. His environment and the type of treatment that were given him had incapacitated him for the larger opportunities that his life should have held.

I repeat the statement that the attitude that is acquired during the first five years of life, toward authority, toward property, toward social development, carries with us consciously or unconsciously through the rest of life. It does—or does not—make us desirable persons to participate in a democracy. After all, our democracy, the character and conduct and ideals of the citizens of the democracy, are made by the homes and the school and the gang. They determine largely our mental habits, our moral aspects, and our everyday thinking, and they are fairly well crystallized in that first small democracy that a human being encounters, which is his own home. Our influence later, our curricula, and our ideals may set into action certain types of thinking, but the real first impressions are the impressions of the home.

I think we have little reason to be impatient with the youth of today. They are what we have made of them, and those of you who are teachers have but to look back and ask yourselves some questions. I wonder if one of the questions that we shall ask ourselves until we finally answer it is whether the home and the school have kept pace with the child of today. We have in the child of today an electrically started, an auto-activated, and a radio-connected product that many of us are just beginning

to know. Moreover, we not only have them, but we have the gang, just as much electrically started, auto-motivated, and radio-connected.

In our homes and in our schools we fail to understand, to cooperate, and to sympathize with this wonderful human product of civilization, who has different interests, who has different impulses, who has different stimuli. Do you know that the children of two, three, four, and five are now talking about motor cars? They are talking about carburetors and gears and airplanes. Do you know that they live in a real world with a different type of impulse from ours? Has the home not remained unsocialized, while our democracy has become more and more highly socialized?

Do I need to illustrate it in any more effective way than that of the government bureaus? I am quoting a paper I heard last year in which a speaker said that twenty years ago there were eight or ten government bureaus, and today there are about two hundred. A socialized form of government. Is the home becoming equally socialized? Has the home entered into the community and has the community entered into the home so that the child does not have a sense of loss in returning home after he has been in the community?

Perhaps a real danger to democracy lies in the fact that parents of this generation are really afraid of their own children. They do not know how to meet their problems of behavior. They do not know how to treat their character formation. If you do not believe this, become head of a Home Economics Department for one year, and hear mothers and fathers telling you, "I can't make Mary do that. Will you please see that she does it?" Think of a mother asking a mere school teacher to make her daughter do something. Problems of behavior, of conduct, of character formation arise today that parents are not yet able to cope with.

Almost everybody is afraid of the gang. I have had a considerable fear of it myself at times, having been in the midst of an adopted family, or rather, having an adopted family. When the young man who was the leader in that group was having his first love affair he asked me if he and the gang could take the

Ford. I knew then what it was to have the fear of the gang. I have never quite gotten over it. I do not think my experience in France ever put the fear in my soul that I had in trying to answer his question, because I had taken the stand that the Ford was not to go out with the gang. But this time the gang went out with the Ford. I think I have seen a college president afraid of the gang. I have seen college professors afraid of the gang. I have seen gang reaction. I know what we mean by the influence of the social group.

I wonder if the hour has not come when we must face the situation squarely and honestly; must be willing to test the method which we use in the schools and the thinking that we do in homes. We must answer the question, Who is going to teach the first lessons of democracy? Are they going to be taught in children's homes or must the school assume another function, and give to the child his first lessons in justice, in honesty, in honor, and in personal responsibility?

Our schools do not have the children until they are six. When they are six they are too old to get their first lessons, we must begin to think about the training of men and women for parenthood. The kinds of research and experience and study which acquaint us with the problems of those first five years are educating and making the world understand the importance of early childhood, and I believe that our national life is not safe until people are personally truthful, honest, and honorable.

THE ANTIOCH ADVENTURE IN HOME ECONOMICS

Julia Emery Turner
Antioch College, Yellow Springs

One writer has said, "Education has long combined two factors, the tradition of books and schools, and the great tradition of the common life." President Morgan and the rest of us at Antioch College, old and young, faculty and students, believe the school has assumed undue importance. The result for the individual is difficulty in adjustment after leaving school; for society, an educa-

tional system swamped with orders beyond the point of good quality production.

The Antioch prescription for this condition is to revive the ancient tradition of training in the ways of common life, thus relieving the schools and giving the student that combination of work and study which is essential to symmetry of character. The method was worked out by Dean Snyder of the University of Cincinnati. We modified it slightly, for we have the student in residence at his books twenty weeks of the year, alternating in five-week periods with work in industry, studying life as real folks live it. In the classroom he talks about Capital and Labor; on the job he knows "my boss" and "my buddy on the machine."

Academic procedure at Antioch College differs from conventional college methods chiefly in two particulars: in the presentation of subject-matter, and in the number of courses required of all students. Though the faculty have come from many colleges and many lands, out of their composite training they have evolved few novel methods of instruction, but the selection of subject-matter and the order of presentation show a change of emphasis comparable with the technique of the progressive schools. The purpose of the instructor is always to solve the problem or develop the principle so as to show its relation to the life of the student today.

President MacCracken of Vassar calls education "catching up with the past." Mr. Morgan says the students need to know in summary what the past has accumulated in many fields; hence natural science, social science, philosophy, and psychology are required courses. In the light of this knowledge of the past, youth must study society as it is now organized; so finance, legal principles, industrial problems are required. To orient himself in his generation he takes, as a Freshman, *college aims;* as a Senior, *life aims.* That he may be physically fit, he is taught the best the world knows about hygiene, and given treatment, exercise, prophylaxes, and good advice—all of which he takes lightly, with the scorn of youth for the gift of well-being.

Having insisted that our student look in upon all these subjects, we believe he has the data to determine his life interests, and he

elects optional courses; as a Freshman, one; as a Senior, four or more. Some of these are vocational, but all meet Matthew Arnold's definition of culture: "It aims to make an intelligent being yet more intelligent, and to arouse in him zeal to make reason and the will of God prevail." None are highly specialized, for Antioch does not aim to train specialists, but rather administrators, all-round men and women, with "gumption" and adaptability.

In household economics the elective courses are fifteen: in nutrition dietetics, special diets, food handling; textiles, clothing, costume designing; housing, house management; child care, home nursing; special methods of teaching. In other departments there are correlating courses elected according to the trend of interest of the individual student; for example, bacteriology, genetics, accounting or journalism. For advanced special courses we recommend a summer or a year at Teachers College, Simmons, or a university. We value highly the opportunity to send mature students to the Merrill-Palmer School.

While in residence following the academic curriculum twenty weeks a year for six years, the students live in a quiet village on the edge of the open country, with a picturesque glen for front yard and playground. The vine-covered buildings are rich in traditions of Horace Mann, the first president, of Edward Everett Hale, long chairman of the board of trustees, of G. Stanley Hall, and of other men who went out from here. Campus life is simple, homely, happy. The student body is enrolled under the Service Council to make Antioch beautiful and worthy.

For twenty-five weeks of the year the students may go out, "on the job," in a wage-earning occupation. The problem of finding the position to fit the ability and the need of each student is our problem of perpetual motion. In household economics especially tradition hampers the decision of the girl. It takes courage to become a visiting housekeeper in two faculty families even though it is well paid, superfine training in home making, and a basis for delightful friendships.

In a class called lunchroom-management are two boys and eight girls, all now handling food, earning from $15 to $25 a week. In

the recitations we study the problems and the principles economic, social, ethical, which are dramatically apparent in a public lunch-room but just as fundamental in the family kitchen and dining room. The students hold the following jobs: manager of the college dining room for two hundred and fifty; manager of the college tea room, serving about one hundred and fifty orders daily; serving salads in the Y. W. cafeteria; sole person in charge of lunches for thirty-five little children at Moraine Park Junior School; employee in pastry kitchen of Cleveland Woman's Club; manager, cook, and housekeeper for girls club in Dayton. Back of them is such experience as this: assistant to a dietitian in a hospital; in charge of a dining room in a Maine camp; ten weeks in a cracker factory.

These positions represent hard work. There is little romance in any of them, but much sociology, psychology, economics, and that fine zest for life which work alone can give, productive service. This is democracy, this education in the great tradition of the common life.

INDUSTRIAL AND VOCATIONAL EDUCATION

ROBERT E. SMITH, *Ohio State University,* Presiding

MANUAL ARTS, AN EDUCATIONAL NECESSITY

CALVIN DERRICK
Director of Administration, New Jersey State Prison, Trenton

That I may not be considered entirely an outsider in this group, let me preface my remarks with the statement that I was for years a teacher and a high-school principal before taking up work in the field of delinquency. My experience as a teacher covered the work in the rural schools, night schools, and shop schools; my work as a principal covered grammar-school and high-school work. I repeat these facts to make you understand how keenly I appreciate difficulties to be met and overcome in the field of public-school education. I realize, with you, that any forward movement or innovation in the field of revised courses of training is likely to be branded as "fads and frills," while failure to make departures into new fields denotes we are in a rut and nonprogressive.

A very rapid increase in the complexity and magnitude of the problems of public education has practically swamped the public schools in all parts of the country. The general order of things has changed, is changing, so fast that even the teachers themselves are "put to it" to keep up the pace. The system tries to take on new phases, but it fails to drop much that is old and useless, with the result that the courses of study are heavy with obselete material which many types of children cannot assimilate. You will probably be inclined to answer this assertion by saying we have provided many new courses to meet the new needs. But the question is, Do these courses really meet the new needs?

I was particularly interested in an item coming out in the *New York Herald Tribune* recently. The *Herald Tribune* in each issue carries, at the bottom of the editorial page, in a frame under the caption, "Twenty Years Ago Today," a half-dozen items that were of local interest twenty years prior to the day of issue.

Under this caption, the following quotation from the *New York Tribune* of March 30, 1905 appeared:

> Frills and fads in the New York public schools were defeated yesterday. The Board of Education voted to abolish so-called nonessential studies in the first year of the elementary schools. The teaching of sewing, physical training, organized games, physiology, hygiene, and drawing was eliminated.

I cite this simply to emphasize the fact that the program of reorganization and the introduction of new ideas in the public-school system are always hampered by public opinion. In this case a lay board decided against the professional group and dropped out of the elementary school five very vital subjects, because, to the lay mind, the names of these subjects were unfamiliar as part of an elementary course, and therefore constituted "fads and frills." The same thing happens often when we attempt to eliminate certain nonessentials from the course of study. The parents think back to their own childhood days, declare their early studies to be essential, and resist the change.

Nevertheless, in the course of the last generation, there have been a great many important changes made in the common-school courses of study as well as in college and university courses. But we cannot yet claim too much for our enriched public-school courses of study. It is true that the enrichment has sent more boys and girls to college, especially into technical courses, but it is also true that the number yearly failing to complete requirements in the grades is also increasing. Various reasons are given for this. Many claim the trouble lies in the multitude of subjects crowded into the program; others lay it to the outside activities of the children and the carelessness of the home. Some excuse it by pointing out the overcrowded conditions in our schools which make it impossible for the teacher to know each pupil and to be able to give the personal attention required. Professionally, the teachers know that none of these reasons are the real causes, although all of them are factors in the problem.

It seems to me there are three main factors to take into consideration in an attempt to analyze this question. These factors are the social and industrial conditions, the *enlarged* rather than

adjusted course of study, and the many types of children represented in the school population.

Referring just for a moment to the social and industrial conditions, we all know the time—not so long ago either—when educational training was not considered essential or indeed very desirable for the general run of people. A very few people were educated. All others found their industrial level and through their industrial level their social status was more or less fixed. From this condition there was a general and rather rapid advance until it was found desirable that all of the better-class and middle-class people should receive some education. Something over one hundred years ago public-school education became the rule in this country, and, generally speaking, all the children of all the people received education. The requirements were simple; the emphasis was placed upon a few subjects, and the ability of the pupil, as expressed by his personal accomplishment, was accepted as the measure of his education. Examination standards were not general, and record systems were not referred to to determine one's scholastic standing. Within the memories of probably a good many people present, certainly within my own, high schools were scarce. Children of twelve or fourteen years of age who developed a dislike for school or who developed a major interest in work, simply quit school and went to work. It was not considered any stigma if the child had not graduated from the eighth grade, for instance. His social standing was not hindered nor his mental ability questioned. I can recall vividly a dozen or fifteen boys of my own acquaintance attending the same little red schoolhouse, who never went to school after they were twelve or thirteen years of age except for two or three months in the winter, who never studied anything but the three "R's" and probably at no time in their lives could have passed a fifth-grade examination, although they might have been able to pass the eighth-grade examination in arithmetic or reading or history or some subject they especially liked. All these boys have become successful men with good social standing and fathers of good families. This condition was duplicated all over the country, in fact, it was the usual condition for rural communities. I remember very well the sudden impetus

given to primary and secondary education about 1890 to 1900, when the township system eliminated hundreds of rural schools, small hamlets developed union schools, and many small cross-roads towns had high schools. About this same time the character of our emigration was changed and our emigrants colonized in the cities. About this same period also there was a tremendous development in the application of electricity. I well remember when the electric-trolley cars were first started, electric lights replaced gas, and electric motors replaced foot- and hand-power machines. Bessemer steel came onto the market and revolutionized railroading. The rapid extension of foreign trade, the development of new territories in all parts of the world, as the result of the invention of mechanical devices to displace man power, resulted in great expansion of mills and factories. Tariff revisions of this period greatly influenced experts. Cities began to grow rapidly. Big towns grew up about isolated manufacturing plants. A large proportion of the emigrants found their way into factory work. American youth gradually began to drift city-ward in larger numbers than ever before, and rural conditions changed.

These are all important factors to be considered in any attempt to understand the present troubles in our educational system. They cannot be ignored. It must also be kept in mind that during this same period educational forces were trying as never before to adjust courses of study to the new order. I recall when physiology and hygiene were made compulsory in New York State schools, when drawing was introduced, and manual training was put in to meet the demands of certain types of children in certain localities, especially in factory centers. We introduced sewing, manual training, and some manual arts. In some places they were received. In other places they were soon eliminated. School superintendents and principals themselves were responsible to a great extent for defeating these plans, by requiring a standard of at least fifth grade or sixth grade, and in some cases seventh grade, for entrance to the manual-training department. Along with this development came the examination system, better grading, more accurate records, and compulsory-education laws.

Colleges multiplied and universities became overgrown. Education has become popular and socially, commercially, and industrially necessary.

But notwithstanding the fact that our educational system now is represented by a fine gradation of schools, the kindergarten, the primary school, the grammar school, the junior high, high schools, technical schools, colleges, universities, beside many special schools for special courses, the number of children annually failing to meet the ordinary requirements of their age and grade is very, very large. We thought to overcome these difficulties by the introduction of domestic science, shop work, special-class work, and a great many other special things, and these efforts have saved a very large number of children from failure and defeat. But it appears not to have really hit at the root of the problem, mainly, I think, because there is a lack of adjustment for the individual child; or in other words, we have not yet properly applied the principles of education to unadjusted children; in fact, have not found out much about children. We know a great deal about children in general. We know a great deal about the so-called average child, the one who just naturally makes his grade term by term and year by year, who is neither too bright nor too dull to fit into a class of forty or fifty pupils without demanding too much attention or attracting much notice.

Our whole scheme of education is based upon the assumption that all children are of equal, or nearly equal, ability. We have not yet in the public-school courses given full recognition to the obvious fact that there are at least two distinct types of children—those with a verbal type of intelligence and those with a manual type of intelligence. Our courses are all planned for the former, and we labor blindly to force the manually minded pupils through the courses prepared for verbally minded children. We even go so far as to pass compulsory-attendance laws which require these manually minded children to sit in school two, three, or four years after reaching their mental level in an attempt to educate them under a course of training utterly impossible for them to grasp. These two facts tied up together, the course of study prepared for verbally minded children combined with the compulsory-edu-

cation law applicable to all children, are responsible for most of the truancy and juvenile delinquency developing among school children. We accept defeat with reference to these children by allowing them to be taken first from the public school to the special class or too often to the detention or truant school. Later, if they have succeeded in keeping out of court until they are clear of the compulsory-education law, we see great numbers of them going to continuation schools where much the same kind of training, under the same general mistakes, is being carried out. Then they are off our school records, and we do not think very much about them.

It was just this condition of affairs which led the State of New Jersey to make such an intensive study in an effort to solve the educational problem for these mentally crippled children. We had at the State Home for Boys in Jamesburg 680 boys ranging in ages from nine to twenty years, almost one hundred percent of whom were truants. The institution was maintaining the regular eight-grade course of study used in public schools; there was not a single thing in the educational program from start to finish that differed from the program in which the public schools had attempted to train these boys. We began a most intensive study to develop a course of training and to secure a type of teacher that would really rescue these boys. Of course, it is fundamental in planning any training scheme to take note of the great scale of educational differences existing in any group. Trainability, of course, the child must have if he is to receive any benefits from the course of training, and the population upon which we were to center our studies was made up of many strains of European blood, the first generation of American-born children of foreign-born parents. Some of these children might represent generations of favorable background in an old civilization; others would represent a decidedly poor background for any kind of training. The program, however, was worked out.

I cannot take the time to advise you of the technique employed, nor the many preliminary and intermediate steps which followed the initiation of the program. I wish, however, to give you in some detail the plans as they are being operated today under our

classification system, a system which I believe is applicable to every public-school population in the land.

The boys are received under commitment from the courts. Upon arrival at the institution they are placed in a reception cottage, which is a part of the well-equipped hospital. Here the boy remains for any period of time necessary to allow completion of various examinations. The resident physician makes a detailed study of the boy's physical needs, including work of the dentist, oculist, and any specialized services in the way of surgery and laboratory work which are found necessary. During this same period the psychiatrist and the psychologist give most thorough examinations and reports. In the meantime the director of education, the supervisor of discipline, and the cottage father have all been studying the boy. The social-service investigators from the Central Department make a study of the home and community, checking up the court and probation records, finding out every possible fact about the child's background. Everybody now connected with this study makes a full and accurate report of his findings in the case.

Every Monday morning at ten o'clock a classification conference takes place in the office of the superintendent. The conference is made up of all the people who have been making studies of the boy. At this conference each member of the staff, the physician, the psychiatrist, the psychologist, the educational director, the social worker, and the disciplinarian give their impressions and opinions, not only about what the boy is, but what he needs. The kind of treatment, the sort of training, the nature of the assignment, the type of officer he should be required to live under, the type of officer he should be required to work under, and all that sort of thing is discussed. The psychiatrist points out any peculiar mental traits that are likely to prove difficult from the standpoint of discipline and whether the child is emotionally stable or unstable. We require the psychiatrist, particularly, to say how he thinks this child is going to respond to the general discipline of the institution. We require the psychologist particularly to state what he has found regarding the mental ability of the boy, whether he has a verbal type or a manual type of intelli-

gence, and what educational level he is probably capable of attaining. The type of studies the boy is likely to succeed with, what his major interests probably are from the standpoint of employment, and a great many other facts may properly be brought into the diagnostic statement by the psychologist. The social worker details what she has found out about the home, its background, and the hereditary influences. Then from the various studies presented and the discussions following, a plan of training is evolved covering the home training in the cottage, the school and trade training, the playground development, and the moral and religious training. When everything has been settled and decided as well as possible, under the conditions, knowing full well that even now we have not learned all we should know about the boy, we write down in the lower right-hand corner of his classification sheet the date when we shall reclassify and reconsider, not only all the facts here presented, but all additional facts which we shall be able to gain in the meantime. This reclassification generally is put from three to five months ahead and automatically upon the date set, the case comes back to the Classification Committee. The child may come before the Classification Committee every week until adjusted. All of the old material plus a new report from every member of the conference who has re-examined and restudied the boy in line of his development in the institution is presented.

All of this study and classification, competent as it may be, would really have little value unless there were a proper training place for the boy. This is met by the establishment of a manual-education school and a pre-vocational, vocational, or trade school, as well as the regular school of letters. The manual school might very well be termed a big "tinker shop" for that is about what it is. It is under very competent direction and somewhere within it every manually minded boy has a chance to try out almost anything and everything mechanically and manually. He is allowed to "find himself" in this school. He may undertake to do anything that he wishes to do. Even though it is known that he will not be able to do it very well, he is given the opportunity to try. Whatever he may accomplish will be accepted. After he

has, by his own initiative and according to his own ideas, worked out or attempted to work out, something, he has friendly criticism and advice from the teacher, and is encouraged to do the same thing over, correcting the defects. He gradually becomes settled more or less in some particular line of activity which he likes best and therefore does best. We then begin to emphasize this work with him and correlate it with some form of school work. If the project is one that requires measurements, we begin to specialize on the yard stick, the foot rule, and the carpenter's square. We do not attempt to teach much arithmetic except through the medium of the carpenter's square or other measure and the materials the boy is working upon. We try to emphasize the cost of material, and the fact that market and labor values are bound up in good workmanship. This gives a fine opportunity for teaching ethics, morals, and the dignity of labor.

Many features of manual education are nothing more or less than an extension of kindergarten work. This especially applies to children of lower mental caliber where work with shears and colored paper, with water colors and clay, is promoted. I have seen many a boy who was wholly unable to acquire any advantage in the regular school, having reached his training capacity in the third or fourth grade, become completely engrossed in this type of school work. I have seen this type of boy beg permission to give up his play-time in order to continue in the schoolroom with his drawing, modeling, or color work. I have seen these low-grade boys develop an appreciation for the beautiful and artistic that stimulated them in their efforts to improve their reading, writing, and spelling in order that they might acquire from the simple books we gave them, more information about art and a better facility in expressing themselves in their written work about the projects they were carrying out. I have seen the rebirth of interest, the development of character, the transition from the habitual school failure into the efficient pupil; the attitude of carelessness changed to one of earnestness. All of these traits and qualities have been brought out in boys who for years had been habitual truants in conflict with the school authorities and total failures in the average school courses. I have seen many of these

same boys, with their newly awakened interest and their newly acquired skill, pass on into the print shop, become successful pressmen and a few of them rare artists in the linoleum-block-cutting class. The State Home for Boys in Jamesburg has done some remarkably fine linoleum-block work, which has received mention time and again in such magazines as the *Inland Printer*.

Carrying the same principle of manual education into other fields outside of the schoolroom proper, I can repeat practically all that I said in the last paragraph regarding the effect of apprenticeship work along the lines of cement work, bricklaying, plastering, some forms of carpentry, sheet-metal work and plumbing, and in fact almost any line of mechanical endeavor that one can mention.

I know that practically every teacher in this room has accomplished some, if not all, of these same things in the public schools. I know I am not telling you anything startling or new. I am not pointing out any new paths to you. I am trying to say to you, however, most earnestly, that we accomplish in the institutions these same things for the children more rapidly and better, perhaps, than a public school can do it: first, because we deal with fewer numbers in each class; in fact, we are able to make the work almost wholly individual, and second, because we do not have the deteriorating influences of the antagonistic or indifferent home and the community to combat. I am trying to say to you most earnestly that thousands of children who are total failures in the public schools, who become chronic truants, who have never learned what it means to succeed, to excel, and to achieve, could be given a good education and be made very useful citizens if the public-school system could in some way manage to take a leaf from the book of the institutions in dealing with this particular type of child.

It may be argued that certain types of these children do not belong in the public school but in an institution. We will grant that, but we wish to be on record as saying that they do not necessarily need to be in a correctional institution. These children become delinquents largely because of their failure in school. If we could develop manual-education schools in every com-

munity, and, through a proper study and classification of children in the early grades, determine which children are manually minded and must of necessity at an early stage pass into a manual school and receive a manual education, we certainly would cut out of the ranks of delinquents thousands and thousands of children.

It is a tragedy that we force children to become law-breakers and subjects for correctional, custodial institutions before attempting to discover their mental handicaps and to adjust them educationally. Some day we are going to be wise enough to begin the classification of school children in the first grades. We are going to classify every child in the public schools every year, until it is definitely established for each child what kind of training he is best fitted to receive. Some day it is going to be our aim, and our universal concern, to educate every child who is capable of training. We are going to recognize more than one type of intelligence and prepare courses of study for more than one type of intelligence. This plan, coupled with a sufficient number of schoolhouses to house the children, each school supplied with a sufficient number of teachers to allow classes to be cut down to twenty or twenty-five pupils, with the introduction of manual arts in various forms at every necessary cross roads in the course, is going to let us discover that the child with a fourth-grade or a fifth-grade intelligence can receive a relatively broad education. We will realize that we need not restrict their training to the particular group subject printed in the present course of study.

We are going to realize that manual education is the only feasible means at the disposal of the teacher to make the manually minded child become conscious of his own powers. Good citizenship cannot be developed in children who are conscious only of their failures.

In closing let me express the hope that the influence of this group of manual-arts and manual-training teachers may become yearly stronger for the establishment of those principles of education, and those changes in the public-school courses of study, which you are so well convinced are fundamental to the success of many large groups of children.

INDUSTRIAL GUIDANCE FOR FUTURE INDUSTRIAL WORKERS

R. L. Dickinson
Industrial Secretary, Y. M. C. A., Columbus

One of the greatest problems of the day among the young people who are in our school is, "What shall we do in the world?" Statistics tell us those things which men have done and are doing now, and aid us somewhat in plans for the future. We find from the 1920 census of sixteen of the largest cities of Ohio, except Cleveland and Cincinnati, that from a population of nearly one and one half million people, six hundred and thirty-five thousand of them were engaged in gainful occupations. Of these, three hundred and thirty-five thousand or more than fifty percent, were engaged in industrial pursuits. If this is to be taken as a fair criterion, it means that practically every other boy now in the public schools of our cities will some day be in some form of industrial work, and therefore, should have some industrial training.

Industry today requires two classes of workers, managers and workmen. It also requires three kinds of workmen—skilled, semiskilled, and unskilled. The most ignorant and unintelligent do the unskilled; those who have some training do the semiskilled work; and the highest type of workmen do the skilled work.

Two great tasks confront us in training our industrial men of the future: (1) to train men to fit into the mechanical conditions of industry, and (2) to train men to fit into the human conditions of industry.

The mechanical phases of industry have progressed so rapidly that comparatively soon the so-called common labor will be almost done away with through the use of modern machinery. Hence men must be trained to face a machine age. The excessive use of machinery, however, brings out serious problems. It creates monotonous tasks, and the man with the trained mind will not be satisfied with that kind of work. Furthermore, the greater problem of industrial relationship comes up more strongly today than ever before. While the mechanical problem has at least

approached a solution, the human problem, which is infinitely greater, has only been touched.

The place of the teacher of today who is going to perform his task well is definitely marked. The task is threefold. First, he must train technically. In this he must establish courses of study to teach that which will really fit students to enter the highly specialized, highly technical industrial field. In determining these courses he must cooperate with the organizations of industry, namely, organizations of management and labor unions. These know the needs of a particular field, as a teacher cannot, and should be consulted in all cases. Second, he must guide vocationally. Not every boy is suited to industry, but, on the other hand, not every boy is suited for the professions or for business. Since it is probable that every other boy in our cities will eventually land in industry, the teacher must help the student to decide wisely what course to follow. Third, he must train ethically. Since the human factor causes the greatest problem in industry, this training is the most important of all. The most serious problems of today arise from improper attitudes. Early training can set standards which will rule a life. Attitudes on the part of both management and men in industry must be right if the industrial situation is to preserve an even keel during the next century.

JUNIOR HIGH-SCHOOL PRINCIPALS

VELORUS MARTZ, *Principal, Crestview Junior High School, Columbus,* Presiding

THE SUPERVISION OF INSTRUCTION IN THE HIGH SCHOOL

FRANKLIN W. JOHNSON
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It is only recently that the subject of supervision has had a place on the program of secondary-school conferences. It is still a word without meaning so far as the experience of most high-school principals and teachers goes. I have asked a large number of teachers of experience how many had ever been visited by a principal or supervisor for an entire period and never have had an affirmative response from more than an insignificant number. In the elementary school, on the other hand, supervision has long been recognized as essential and special training has been required in the preparation of supervisors of different subjects.

If we look for an explanation of this difference between the elementary and high schools with respect to supervision, we shall find it in the different conception of teaching which has prevailed until recently in these two parts of our educational system. In the elementary school, teaching has been regarded as an art with an appropriate technique to be acquired. In the high school, teaching has been regarded as a gift, conditioned only upon the control of subject-matter. In the elementary school there has been a technique to be improved; in the high school the mastery of material has been assumed at the start.

During the last ten years the books of Parker, Colvin, and others have appeared, dealing with the general methods of teaching in high schools. Special methods of teaching the various subjects have developed. As a result, high-school teaching also has become an art, and the need of supervision has been recognized, for wherever there is a technique to be acquired, there is also a technique to be improved.

It would seem unnecessary to say that instruction is the most important activity taking place in the school. In short, it is for the sake of instruction alone that the entire machinery of the school is set up and the expense of its operation is incurred by the state. It is apparent, then, that the improvement of instruction is the most important end in the administration of the school; and improvement of instruction, of course, means supervision, for this is its obvious aim. Improvement of instruction means, for the most part, the improvement of teachers in service. Under the best conditions there is always some relatively poor teaching, and every principal knows that it is not easy to dismiss a teacher except for the grossest inefficiency.

Granting the importance of supervision in the high school, there arises the question, Who shall do it? If we follow the practice of the elementary school, the answer would be the special supervisor. This method is employed in some large cities, but in most communities, where there is only a single high school, it is altogether impracticable. Supervision, in general, then, must be provided for within each high school. It is ordinarily assumed that supervision is the task of the principal. In courses in high-school administration we tell the principal that he must so arrange his schedule of duties that he will devote the major part of his time to supervision. He goes home at the close of the heated term with high resolve to meet this standard, but by the time he comes up for breath after his plunge into the inevitable routine of the first two weeks of the new year, if he recalls the teachings of the summer at all, it is only to think that professors of education would not talk as they do if they actually had to conduct a school.

The fact is there is not enough material available, based on successful experience, for any of us to assume an air of dogmatism when discussing supervision of high-school teaching. Moreover, most principals have had little or no such professional training in supervision as is available, and fewer still have had any experience either in receiving or giving supervision. There has until recently been no recognition of the function of the principal in the supervision and improvement of instruction, either on the

part of principals themselves or of superintendents and boards of education. Principals have usually been selected because of their social and executive qualifications, and they have naturally developed in the direction of routine efficiency in dealing with the personal or managerial problems of the position as commonly conceived. Such knowledge as the principal has had of what goes on in the classrooms of his teachers has been secured through office gossip with pupils, parents, or teachers, or by glass-door or keyhole observation as he has hurried through the halls on the lookout for chance or anticipated disorder. Nor have teachers ordinarily expected, or would they understand, the meaning of the classroom visitation by the principal. The head of a large high school told the writer that if he were to spend an hour in a classroom, the teacher would suspect that something was wrong and the pupils would be sure of it.

In the small high school, and this means the great majority of all our high schools, the principal must do the supervising. In the larger schools, say of five hundred pupils or more, in which there is an assistant principal he may prefer to select as his assistant some one specially trained in supervision. On the whole, however, it will usually be better for the principal to turn over to his assistant the routine administrative tasks, and to undertake himself the more professional duties of supervision.

In schools sufficiently large to have departmental groups, the principal should entrust to the heads of departments the responsibility for the intimate and detailed supervision of their groups. There will be enough for the principal to do in the general direction of instruction to require all the time and supervisory skill in his possession.

Program of Supervision

An effective program for improvement of instruction involves, besides a recognition of its supreme importance, five things: a liberal allowance of time for observing teachers at work, a detailed knowledge of what constitutes good teaching, a technique of supervision, a spirit of cooperation on the part of the teachers,

based on a recognition of the value to them of such a program, and a testing of results.

I. *Time for supervision.*—To secure the necessary time, the principal should make a survey of the varied tasks which enter into the management of his school, with careful consideration of their relative importance and of the most effective methods of performing them. He should decide which of these tasks he may best perform himself and which he can delegate to others. Before he can secure any substantial relief from routine, there will be required a campaign of education of his immediate staff and of his superintendent and board. The members of his staff will not willingly accept additions to their already heavy schedules unless they are convinced that gains are to be secured in which they will ultimately share. Indeed there is grave danger that by assigning to teachers tasks not directly related to the work of the classroom the actual effectiveness of teaching may be diminished. It should be possible to reduce the teaching schedule of those who are asked to perform regular duties of administration. Many tasks would be better done by skilled clerks. In schools with a registration of five hundred or more pupils there should be an assistant principal.

But before any considerable increase can be made in the teaching or administrative staff, its need must be made apparent to the superintendent and the board. Boards of education in their provision for the administration of the high school do not usually display the sagacity which they show in the management of their private business affairs. This is mainly due to their lack of enlightenment. It should not be difficult to convince them that it is poor business to pay the salary of a professional expert for the performance of the duties of a clerk. If they can be convinced that they have such an expert, for the sake of economy, they will make it possible for him to perform his professional duties, as they would for the managers of their stores or shops. In any given school, the principal must take up the situation as he finds it and begin a program which he will hope to expand as he is able to convince his staff and his superiors of its value. This will require clear insight and resolute determination. The only practical way

to escape his present overwhelming program of routine is to make for himself a daily schedule of supervision which he should allow to be interrupted only by extreme emergency.

II. *Technique of teaching.*—The second requisite, a detailed knowledge of what constitutes good teaching, is easier to attain. It is true that the qualifications on which the selection of principals is based have not, in many cases, included such knowledge. The condition in this respect is improving rapidly by reason of the growing insistence upon professional training and the consequent increase in attendance upon professional schools particularly during the summer sessions. It is not necessary that the principal have expert knowledge of the subject-matter of instruction in the various subjects, but he should be well trained in the general methods that apply to all instruction and in the adaptation of these to the special methods that apply to the different subjects of the curriculum. He should thus be able to substitute for the general impression method of judging a teacher's work an estimate based on detailed evaluation of the methods of teaching and the results secured.

III. *Technique of supervision.*—The third requisite, a technique of supervision, is the most important and the most difficult. We have for a long time been training supervisors of special subjects for the elementary school, but only very recently have courses been offered in professional schools for training in supervision of high-school instruction. These courses and the literature which is beginning to appear in the journals and other educational publications give promise of rapid development in this field. The numerous score cards of Elliott, Boyce, Rugg, and others, while intended primarily for another purpose, probably have been most valuable in their analysis of the detailed qualities of merit in teaching and the opportunity which they offer to teachers for self-analysis. It has been pointed out that they are unsatisfactory for rating the effectiveness of teaching because of their emphasis upon qualities of teaching rather than upon the results of teaching. Some such detailed analysis of the teaching process, in the hands both of the supervisor and the teachers, is a necessary part of the technique of supervision.

In order to secure the largest results the principal must have a definite plan of action. It is essential that he spend much time in the classroom, visiting his teachers not once but many times, not for a few minutes but for entire periods. It may be best for him to give most attention to his new and least experienced teachers. They are likely to be most immediately responsive. He may decide to give his attention at one time to the work of a single year or of a single subject. In any case, it is wise not to attempt too much at once but to concentrate upon some particular group or upon a single phase of teaching. It is a good plan to take up for a time classroom management, or some topic of technique like questioning or problem solving, thus giving attention to some particular phase of the teaching process until general and permanent improvement in a limited field has been secured throughout the entire staff.

The follow-up of classroom observation is most important. Under no circumstances should the principal interrupt a teacher with criticism during the progress of the recitation or discuss her work in the presence of pupils. It is well to follow each visit with an interview in which the excellencies and defects observed are discussed in a direct and sympathetic manner. The interview may be held at whatever time or place is most convenient. One successful principal has an understanding with his teachers that his visits to the classroom are to be followed by a return call at his office during the day. These interviews should be arranged without undue formality, and especially in the case of new or inexperienced teachers should not be long delayed. Many a conscientious teacher has lost sleep through anxiety as to what her principal thought of her performance. Sometimes the principal hands to the teacher at the close of the period memoranda made during the observation which indicate the items to be taken up in the interview. This procedure is of doubtful value as the memoranda may not be clear and are likely to place the teacher in an attitude of defense. In the interview the principal should aim to give not merely criticism of defects, for there is seldom a recitation in which something may not be commended. Harsh criticism and dogmatic directions should seldom be given. The aim is to

secure the improvement of teachers as he finds them, and the teacher should leave with a feeling of encouragement and with some constructive suggestions.

In addition to the personal interview, group discussions and faculty meetings play an important part. The checking list for supervision already placed in your hands might serve as a basis for a series of faculty meetings running through an entire year, in which the various topics may be made to parallel the points of emphasis in supervision from week to week.

IV. *Cooperation of teachers.*—The discussion of the follow-up has anticipated the fourth requisite of the program of supervision, the securing of a spirit of cooperation on the part of the members of the teaching staff. Any misapprehension or suspicion as to the purpose of supervision will soon be removed when teachers are convinced that the principal sincerely desires to help them improve and is not concerned primarily with determining their fitness for promotion or discharge. He must avoid giving the impression that he regards a single observation as sufficient for determining the quality of a teacher's work. He should not fail to note and express approval of specific evidences of improvement. Through individual and group conferences he should patiently seek to improve the professional attitude and teaching skill of his staff, especially recognizing evidences of initiative or special effort on the part of individuals. He should make available any helpful material which he comes across in his reading and should encourage his teachers to read widely in their special fields. Especially should he encourage individual teachers and departments to try new materials of instruction or teaching devices and should cooperate in every possible way in developing an experimental attitude in his staff. Such a program of supervision cannot fail to secure an enthusiastic response and will cause petty jealousies or complacent satisfaction with mediocre attainment to be replaced with real professional zeal.

V. *Testing of results.*—The last, but by no means the least, important part of a program for improving instruction is the testing of results. If supervision results in the improvement of instruction, the amount of improvement can be measured. It is

not sufficient to draw subjective conclusions as to the results of supervision; valid conclusions can be reached only by careful quantitative measurements. Subject-matter tests are available in several subjects of the curriculum, and others are rapidly appearing, which, when standardized by use, will furnish reliable instruments for measuring school products. Careful records of achievement should be made at stated intervals for comparison of pupils' progress and of the work of different teachers and departments. Changes in subject-matter organization or in methods of instruction should thus be compared to determine their relative effectiveness. The principal should realize that his success as a supervisor can be shown only by the carefully measured results of the instruction in his school.

A Checking List for Supervision

The accompanying checking list for the supervision of instructors has grown out of a course given by the author in Teachers College, New York. It attempts to enumerate the most important elements of good classroom management, of the selection and arrangement of subject-matter, and of the technique of teaching. Critical readers may note the omission of items which they think should be included, others may think it is too detailed or that its organization is improperly balanced. It is submitted as the sort of analysis which will prove helpful both to the supervisor and to the teachers whose improvement is desired. It should be observed that this checking list undertakes neither to determine the relative importance of the several items enumerated nor to provide for definite rating of the teacher. Its purpose is simply to aid supervising officers and teachers by giving a detailed analysis of the elements of good teaching as a basis for individual reflection and group discussion. In order to give greater objectiveness to the various items, the accompanying set of standards has been drawn up, the numbers corresponding to those of the checking list.

The material is the result of a classroom project to which the various members, all experienced teachers, made their individual contributions. After long and detailed discussion it was thoroughly tested in tentative form. The entire group observed

several actual recitations of high-school classes, using convenient portions of the scale. After some facility had thus been secured, the entire checking list was used upon a single class recitation and individual scoring was made and preserved. Following this group observation, each student made ten individual observations and records; then a second group observation was made, and the results were compared with the first. It was found that the time required for recording the results of the observation was greatly diminished and there was a marked gain in uniformity between the scores of the separate items. The material was then thoroughly revised in its present form on the basis of its repeated use.

Such a checking list can be made most valuable by placing copies in the hands of each teacher and asking each one to check himself on the various items. The principal himself should similarly check his teachers. It is, of course, unwise to do this while actually observing teachers at work as this procedure would prove a hindrance to both supervisor and teacher. Its chief value lies in the objectivity which it gives to observation and to the following interview with the teacher. Teachers themselves should be encouraged to observe other teachers at work, not of course for the purpose of rating each other, but for the effect which critical observation of the defects and virtues of others will have upon their own methods.

NOTE: A copy of Mr. Johnson's "Checking List" will be found on the next and the succeeding pages of this report.

CHECKING LIST AND STANDARDS FOR SUPERVISION OF HIGH-SCHOOL INSTRUCTION

FRANKLIN W. JOHNSON
Professor of Education
Teachers College, Columbia University

Teacher..... Date.....

Subject.....

Check in one of three columns, A-C. If a sufficient number of teachers are observed (say 50) approximately 20 percent should be checked A. and C; and 60 percent B. If the feature does not appear, check in Column "No."

A. CLASSROOM MANAGEMENT	No	A	B	C	Remarks
1. Was proper attention given to lighting, temperature, ventilation?					
2. Was the equipment of the rooms, e. g., desks, blackboards, etc., in good order?					
3. Was there sufficient supplementary material, e. g., maps, books, etc.?					
4. Were supplementary materials effectively arranged?					
5. Was the teacher physically well qualified?					
6. Was the teacher's voice pleasing and enunciation clear?					
7. Was the teacher's dress suitable?					
8. Were the teacher's manners suitable?					
9. Did the teacher use correct English?					
10. Did the teacher show evidence of possession of the following qualities in a desirable degree?					
(1) self-control					
(2) tact					
(3) decisiveness					
(4) enthusiasm					
(5) resourcefulness					
(6) sympathy					
(7) fair-mindedness					
11. Did the class work begin and end on time?					
12. Was attendance taken economically?					
13. Were laboratory, shop or other materials effectively handled?					
14. Was provision made for seating of pupils with defective sight or hearing or other physical differences?					
15. Did pupils enter, leave, and move about the room in an appropriate manner?					

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	No.	A	B	C	Remarks
16. Was the posture of pupils good?					
17. Did the work of the class proceed smoothly and sequentially?					
18. Were pupils' responses well directed and expressed?					
19. Was the attention of the entire class keen and continuous?					
20. Did good order inhere in the situation without apparent compulsion?					
21. Was the group characterized by an attitude of courtesy and cooperation toward all its members?					
B. Selection and Arrangement of Subject-Matter					
1. Was subject-matter related to the social needs of the pupils?					
2. Was it adapted to the abilities of the group?					
3. Was material arranged with regard to the relative importance of the different topics?					
4. Was effective use made of materials from other sources than the textbook?					
C. The Recitation					
I. Aim					
1. Did the teacher have a clear and worthy aim for the lesson?					
2. Was the lesson well planned to secure this?					
3. Was the teacher resourceful in adapting unexpected developments to her plan?					
4. Was the aim attained?					
II. Divisions of the Recitation					
1. Was the time effectively divided between (1) testing and drill upon the previous assignment; (2) the assignment of new material; (3) directed work or study on the new assignment?					
2. Was the work on the previous assignment mastered by the group?					
3. Was the new assignment clear and definite; was the assignment well motivated?					
4. Did the assignment grow naturally out of the previous work?					
5. Did the assignment involve activity of the group?					
6. Did the assignment include helpful suggestions as to methods of study?					
7. If the assignment was followed by directed study, were pupils able to apply the assignment successfully?					

	No	A	B	C	Remarks
8. Did the teacher give effective assistance to individual pupils in the directed study?					
III. Teaching Devices					
1. Were all pupils kept busy throughout the entire period?					
2. Was there proper balance between teacher and pupil activity?					
3. Was emphasis placed upon the formation of proper habits rather than upon the acquisition of facts?					
4. Was the proper amount of drill given to secure mastery of necessary skills and facts?					
5. Was drill interesting and participated in by all?					
6. Was the number of questions asked during the period such as would give the best results?					
7. Were questions well distributed among the members of the group?					
8. Did the pupils ask questions?					
9. Were questions correct in technique ("yes" or "no" questions, repeating question or answer, addressing question to group, etc.)?					
10. Were questions well expressed?					
11. Was sufficient emphasis given to questions requiring thought, in contrast to those requiring only information?					
12. Did the pupils show that they had been taught how to attack and solve a problem?					
13. Did the questions follow in orderly sequence?					
14. Did pupils show ability to give well-developed topical responses to questions requiring such answers?					
15. Was laboratory work conducted without waste of time?					
16. Was the laboratory work purposeful, i. e., did it involve thinking by pupils instead of merely following directions?					

What features were most in need of remedy?
What features of the recitation were most commendable?

STANDARDS FOR CHECKING LIST FOR SUPERVISION OF INSTRUCTION

A. Classroom Management

Effective classroom management is based on the assumption that the most important activity of the teacher is teaching; of the pupil, learning; and that whatever interferes with these activities is to be avoided as waste.

1. Light should come from the left side of the pupil. There should be easily adjustable window shades. Artificial light should be available whenever needed.

   Suitable ventilation should be provided for.

   The temperature should be maintained at 68-70 degrees, with humidity at about 50 percent.

   The teacher is responsible for securing the most favorable conditions which the facilities provided make possible.
2. Teachers' and pupils' desks should be kept neat and orderly. Troughs for chalk and blackboards should be kept clean.
3. Classrooms should be provided with usable materials for illustration, demonstration, or application in the various subjects of instruction.
4. Maps, books, exhibits, laboratory material, etc., should be arranged attractively and conveniently for use when needed.
5. Strong physique and good health are essential to continuous success in teaching.
6. A pleasing, well-modulated voice and clear enunciation are important qualifications for teaching.
7. Appropriate dress is such as attracts no attention to itself.
8. The teacher's manners should conform to the best social standards.
9. The teacher's speech should conform to the standards of grammar and good usage.
10. Among the qualities desirable in teachers, the following are important:
    (1) Self-control, the ability to maintain a well-balanced poise at all times.
    (2) Tact, the ability to handle all sorts and conditions of people with skill and discernment.
    (3) Decisiveness, the ability to make a decision promptly and stick to it.
    (4) Enthusiasm, an invaluable tonic for both teacher and pupils.
    (5) Resourcefulness, the ability to turn an unexpected situation to good use.
    (6) Sympathy, the ability to understand and appreciate the point of view of another person.
    (7) Fair-mindedness, the ability to think impersonally and to act justly.
11. The recitation should begin and end on time. Businesslike procedure saves time and imparts good tone to the recitation.
12. Attendance should be taken quietly and with dispatch by the teacher or monitor. A seating plot of the class facilitates this. There should never be an oral roll call after the first day.
13. Laboratory and shop materials should be stored, distributed, and accounted for in such a way as to avoid waste and make them available when and where needed. The distribution and collection of papers and other

material should take as little time as possible and cause the least possible disturbance to the orderly progress of class work.

14. Pupils with defective sight or hearing should be placed so as to relieve the defect as far as possible. Any other special cases should receive appropriate attention.
15. Pupils should enter and leave the room in an orderly and natural manner. Moving about the room or to the blackboard should be without confusion or disturbance.
16. Pupils should sit without slouching in an attitude conducive to attention; when standing, they should not lean upon the desks.
17. The work of the class should proceed without interruption, one step following another in orderly sequence.
18. Pupils should address the group, not the teacher only, when speaking, with clear enunciation and loud enough for all to hear.
19. The attention of the class to the work in hand should be keen and sustained throughout the period.
20. There should be no apparent effort on the part of the teacher to maintain discipline. In case individuals need attention, the skillful teacher handles the situation with a maximum of effect upon the individual.
21. In their interaction toward individuals and the entire group, teacher and pupil alike should exhibit courtesy and a desire to cooperate at all times.

B. Selection and Arrangement of Subject-Matter

1. Subject-matter of instruction should have relation to the social needs of the pupils.
2. It should be adapted to the capacities of the particular group under instruction.
3. In the selection and arrangement of material regard should be had for the relative values of different parts or topics. Not everything within a given subject is of equal importance.
4. The textbook should be supplemented by material from other books and periodicals and from the experience of teachers and pupils.

C. The Recitation

I. Aim

1. For every lesson the teacher should have a clear, definite, and worthwhile aim which should be recognized by the pupils.
2. Each lesson should be carefully planned to secure the aim set up.
3. In the progress of the recitation many things may come up that were not anticipated. The resourceful teacher shows good judgment in deciding what to follow up as worth while and what to pass by as irrelevant to the lesson plan.
4. The effective teacher finishes the period with the aim of the lesson accomplished.

II. Divisions of the Recitation

1. There are three important phases of the recitation, not all of which necessarily appear in a single recitation period:

(1) The recitation on the previous assignment, the purpose of which is

to test the mastery of the assignment and to fix the principles involved through practice.

(2) The assignment, the purpose of which is to prepare the class for the next step in the progress of the work.

(3) Directed study, providing for the immediate application of the assignment.

2. If the new material has been developed properly in the assignment, the class should show a mastery of the work assigned.
3. The new assignment should be clearly and definitely stated. It may be given orally, on mimeographed sheets, or be written on the blackboard. It is important that pupils make a record of the specific requirements to be prepared.
4. The new assignment should grow naturally out of the work already done.
5. If the assignment involves the development of new material, it is made more interesting and effective by securing the activity of the group in its development.
6. The teacher should give much thought to the best ways of learning and must give helpful suggestions to pupils on how to study. To be really helpful, these suggestions should be specific.
7. The test of a good assignment is the ability of the group to take up the preparation of the assignment successfully.
8. In directed or supervised study, the teacher should aim to give assistance in such a way as to increase the pupil's ability to work independently.

III. Teaching Devices

1. All pupils should be kept busy on some purposeful activity all the time.
2. Teachers are likely to talk too much. Pupil activity is more important than teacher activity.
3. The formation of good habits is the most important result that can be secured from teaching. Among desirable habits to be acquired are: having material ready for work, prompt attack, close attention, clear definition of problem. To these the teacher can add a great many other desirable habits, for the best means of forming which he should give directions accompanied by drill.
4. Drill should not be for too long periods. It is more effective if repeated at varying intervals until complete mastery is secured.
5. Drill should be interesting and shared by all. Various devices, such as flash cards, timed practice exercises, concert work, etc., add zest and variety.
6. The number of questions suitable to a given recitation is contingent upon various factors; the nature of the subject, the aim of the lesson, the age of the pupils, etc. The criterion in a given instance must be based upon the principle that the object of questioning is to secure the largest possible amount of purposeful activity on the part of the pupils.
7. Questions should be distributed in such a way as to secure the continuous attention of all and to equalize the opportunity for participation. The varying abilities of pupils should not lead to difference in the number of questions but in the character of the questions given to each.
8. Genuine interest is indicated by spontaneous questions from pupils.
9. Good questioning technique excludes "yes" or "no" questions, unless fol-

lowed by "why," leading questions, repetition of questions or pupils' answers.

10. Questions should be clearly expressed in good English so as to be understood without explanation or amendment.
11. Questions calling for information are of value in testing and drill and for the purpose of assembling pertinent facts in the development of new material. Effective teaching includes many questions which demand thought in the solution of problems based upon the application of principles and facts already acquired.
12. The principal elements in the solution of a problem are:
    (1 Defining the problem and keeping it clearly in mind.
    (2) Recalling related ideas, analysis of the situation, and application of principles which apply.
    (3) Evaluation, by suspending judgment, selecting and rejecting suggestions, and verifying conclusions.
    (4) Systematic organization of material.
13. The questions should bear an obvious relation to each other and should follow in orderly sequence.
14. Pupils should develop the ability and be given the opportunity to make extended, well-organized answers without suggestions or interruptions.
15. Laboratory work should be conducted without waste of time by the group or by individuals. It is not always necessary that every experiment should be performed by all. Demonstration by the teacher or by individual pupils is often better.
16. Laboratory work should emphasize the solution of problems rather than the following of directions.

WHAT SHOULD BE THE NATURE OF FOREIGN-LANGUAGE STUDY IN THE JUNIOR HIGH SCHOOLS

H. C. Marshall
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The recent and rapid development of the junior high school has brought with it many problems of curriculum content and of subject articulation. Set as it is between the six elementary grades and high school, the subjects taught and their relation to each other present many problems.

This paper proposes to report a study upon the articulation of foreign-language instruction which now exists between the junior and senior high schools in thirty-three cities of the United States which have a population of at least one hundred thousand. These cities include New York and many other representative cities throughout the country. All have junior high schools, but in Spokane the three junior high schools are organized for over-age pupils only. In one industrial instruction is given to boys, in another home economics is taught to girls, and in the third, commercial education is offered for boys and girls. No foreign language is offered in any of these junior high schools. In Toledo, where they are just opening junior high schools, no foreign language is offered.

This report is based upon the replies received from thirty-three cities in answer to a letter from Dr. B. R. Buckingham, director of the Bureau of Educational Research at Ohio State University. The following questions were asked and comments were requested:

1. Is foreign-language instruction given in the junior high schools?
2. In what grades are foreign languages made available to the pupils?
3. What status is given in the senior high school to pupils who have studied a foreign language in the junior high school?
4. Is a continuous course throughout the senior high school available for pupils who begin a foreign language in the junior high school?
5. If so, to what extent is a continuous course elected by students?
6. Is it the opinion of the foreign-language teachers that time and efficiency are gained through starting the work in the grades of the junior high school?

7. Is there a tendency in your city to increase or decrease the foreign-language work in the grades?

From the answers to these questions, it appears that some foreign-language instruction is offered in the ninth grade of each of the thirty-three cities, while twenty-eight of them offer foreign languages before the ninth grade. From Table I it appears that *Latin* is offered in thirty-three cities; *French,* in twenty-four; *Spanish,* in eighteen; *German,* in five; and *Italian,* in two. *Latin* is offered below the ninth grade in twenty-six cities; *French,* in twenty-one; *Spanish,* in seventeen; *German,* in five; and *Italian,* in two.

TABLE I

LANGUAGES OFFERED IN THIRTY-THREE CITIES OF A POPULATION OF ONE HUNDRED THOUSAND OR MORE

Subject	In Grade IX	Below Grade IX
Latin	33	26
French	24	21
Spanish	18	17
German	5	5
Italian	2	2

The section of grade VII or VIII in which foreign-language instruction is begun is shown in Table II. The median point for beginning this instruction falls in grade VIII-B.[1] From Table II it appears that twelve cities begin Latin in grade VII, while eleven offer it first in grade VIII. In ten cities French is begun in grade VII and ten others begin it in grade VIII. Eight cities offer Spanish first in the seventh grade, while eight others begin it in the eighth. One city begins Italian in the seventh grade and one in the eighth, while four cities offer German in the eighth grade.

Among the sixty-five individual starting-points for these foreign languages, the balance tips slightly toward beginning instruction in grade VIII, the ratio being 34 for grade VIII to 31

[1]Throughout this report the earlier half of each school year is designated "B," the upper half, "A." For example VII-B means the lower section of grade VII.

for grade VII, but if German is left out of consideration the scale tips slightly toward the seventh grade, the ratio being 31 for the eighth grade and 30 for the seventh. The tendency is to begin

TABLE II

THE SECTION OF EACH GRADE BELOW GRADE IX IN WHICH FOREIGN-LANGUAGE INSTRUCTION IS STARTED IN THE THIRTY-THREE CITIES REPORTING

Subject	Grade			
	VII-B	VII-A	VIII-B	VIII-A
Latin	9	3	8	3
French	8	2	7	3
Spanish	6	2	5	3
Italian	1	0	1	0
German	0	0	2	2
Total	24	7	23	11

TABLE III

NUMBER OF CITIES ALLOWING EXTRA UNITS FOR FOREIGN-LANGUAGE STUDY IN GRADES VII AND VIII

	0 units	½ unit	1 unit	Allow Some Credit	Total No. Credit
VII-B to VIII-A	1	1	5	6	7
VII-A to VIII-A	1	....	2	2	3
VIII-B to VIII-A	4	4	4	8	12
VIII-A only	3	....	....	0	3
Total	9	5	11	16	25

foreign-language instruction in the lower half of the grade, the ratio is 24 to 7 in grade VII and 23 to 11 in grade VIII, (23 to 7 if German be omitted).

The amount of credit given for foreign-language study is perhaps the most important fact sought in this inquiry. Table III shows the number of senior high-school units allowed. The

answers received from eight of the cities cooperating were not sufficiently clear to be included in the tabulation.

From the study of the other twenty-five, we learn that six of the seven cities which begin foreign language in grade VII-B, and two of the three which begin the study in the VII-A allow high-school credit. Eight of the twelve cities which begin foreign-language instruction in the VIII-B allow credit for it, while three which begin this instruction in grade VIII-A allow no credit. The number of senior high-school credits allowed for these subjects is shown in Table IV. Among the cities reporting, a total of sixty-four semesters of work in grades VII and VIII is

TABLE IV

TOTAL NUMBER OF SEMESTER UNITS ALLOWED

Grades	VII and VIII	Total Credits Allowed
VII-B to VIII-A	28	5½
VII-A to VIII-A	9	2
VIII-B to VIII-A	24	6
VIII-A only	3	.....
Number semesters of work	64	13½

offered, for which a total of 13½ unit credits is allowed. If we assume that junior high-school pupils in grades VII and VIII normally progress at half the rate of senior high-school pupils and that one credit is given for each year's work in the senior high school, the credits expected for these sixty-four semesters of work would be sixteen units in place of the 13½ actually allowed. If we leave out of consideration the three schools in which foreign language is first offered in grade VIII-A the units which might fairly be expected are 15¼ in contrast with the 13½ allowed. It is evident that the prevailing practice is emphatically in favor of allowing senior high-school credit for time spent upon foreign-language study in grades VII and VIII. It also appears that the amount of credit allowed is almost universally half that given

for the same length of time spent in foreign-language study in grades IX, X, XI, and XII.

There are other evidences of the general belief among these cities that foreign-language study started early is to be preferred. Sixteen cities say that foreign languages are better mastered by an early start, while others say that they are not. The remaining fifteen cities offer no opinion on the subject. In the eleven cities which allow one-unit credit for work done in grades VII and VIII, or in grade VIII alone, the pupils can finish the four units necessary to meet the college-entrance requirements in grade XI. Extra twelfth-grade work without extra credit is offered in four of these cities. In the rest the senior high school offers no foreign language beyond the four units needed for college entrance.

In six cities the first opportunity for electing a foreign language is restricted to pupils who clearly show a special language aptitude. This native bent is determined by the pupil's scores in certain tests and by previous success in English grammar. A number of the cities recognize the need for two courses, one for those who begin in the ninth grade and the other for those who begin earlier and have been instructed by an informal conversational method. Four cities find that many pupils dropped the foreign languages as soon as they had finished the two units needed for college entrance, while twelve other cities report that the pupils continue throughout the course. All these considerations emphasize the value of an early start, and also indicate that an effort is being made to adjust the curriculum and credits to the recognized value of this instruction. The problem of securing satisfactory teachers for foreign-language work is so vexing that eight cities mentioned it, although it was not suggested in the inquiry. Two have tried foreign-born modern-language teachers and have regretted it. One provides special training, while two others mention the need of it. Three other cities say frankly that skillful teachers are not available. In spite of this drawback, foreign-language teachers report that more pupils are taking these subjects than ever before.

Such a report leads naturally to some consideration of the values of foreign-language study. Every language studied reveals

a wealth of content and a beauty of style. We have, to be sure, wasted too much time puzzling with syntax. We have lost ourselves in formal discipline. Surely it would have been intolerable to Caesar to have his vivid story of adventure and achievement turned into a killing ground for syntax. If the pupils could read five pages a day instead of five lines a day they might get a story out of it.

Literature like travel widens the horizon. Through foreign literature we learn to know new peoples, other societies, strange customs—each better than our own in some respects. We should study foreign language for this content, this literary value. Syntax and dril ought to be means to this end, never ends in themselves. Ability to read silently and rapidly must be developed, but we need a better teaching method and better teachers to accomplish this. With such teachers pupils who have done well in English expression should do well in foreign language.

Foreign language should start in VII-B, or even earlier, as this is the plastic age for word forms. Dr. de Sauze of Cleveland, writes:

> At that age, the student absorbs sounds, acquires vocabulary, imitates intonation, with a great deal more facility than in later years; his organs of speech are more supple; he can still be bilingual; he is less self-conscious; he is always ready to use the language in dramatization and in conversation. We found also that at that particular time (beginning grade VII) a student needed challenge of a new subject that stimulates his interest and trains him in active thinking when dealing with language forms.

Surely whatever is done in any grade should be credited full value for whatever it is worth. This study shows that credit is almost universally allowed at the rate of one-half unit of senior high-school credit for one unit of junior high-school time and this is no more than just.

Needless repetition is all too common in public schools as well as in colleges. Dr. Leonard Vincent Koos of the University of Minnesota in his new book, *The Junior College,* states the case for all of us when he says, "As it is, the repetition goes on unchallenged or with an inadequacy of adjustment to what the student has had already that must involve a staggering waste of time and a demoralization rather than a building up of study habits."

SOCIAL EDUCATION IN A DEMOCRACY

R. L. Cooley
Continuation Schools, Milwaukee

Once upon a time, in a near eastern community, a master of a household lost his donkey. You may know how important a member of the household a donkey is in those parts of the old world. The wise men in the community had spent considerable time endeavoring to find the donkey, but had failed.

There was one man living in the community, who seemed to be in it, but not of it, perhaps a man of genius, or possibly the village schoolmaster. He happened to hear a group of men discussing the search for the missing donkey. Timidly he ventured to suggest that he might be able to find the donkey. The suggestion was received as a joke, if not an impertinence, until upon second thought, their own inability to find the donkey led them to accept his offer of help. As a preliminary, the humble village philosopher drew apart from the crowd and sat down in deep thought. Then he got up and went away. In an hour or two he returned, leading the donkey. The men of the village were much astonished and inquired eagerly how it had been accomplished. "When you asked me to find the donkey," said the man, "I thought 'If I were a donkey, where would I go?' Then having thought like the donkey, I had no trouble in finding him." Now, that is the situation I find myself in this morning. I want to think like the donkey so that we may understand each other, as it were.

It is almost impossible for me to write a speech that I am to deliver. The most carefully thought out addresses I have ever written have always been so modified when I listened to the other speakers and observed the audience, that I have seldom delivered the prepared address. When you make up your addresses in the presence of your audience, and in view of what the previous speakers have said, they require quick thinking.

As an illustration of quick thinking, I am reminded of the story of an incident that happened in one of the foreign countries, probably England, where one of the charming ladies of the nobility or aristocracy was visiting the hospitals to see the soldiers

who were just being brought in from the battlefield, and to give them some expressions of sympathy and appreciation. She went into the hospital and approached the first man who had been wounded. She told him how much she appreciated his valor and self-sacrifice. She said, "I presume you have killed some of the enemy." "Yes, madam." "How many?" "One." "With which hand did you kill the enemy?" "With this hand." She took up the hand and gave it one kiss. She proceeded with the next man, and he had killed two. Ascertaining the proper hand, she picked it up and gave it two kisses. But there was another soldier lying a bit beyond, who saw her coming, and upon inquiry declared he had killed hundreds of the enemy. She inquired with which hand, and he said, "With neither, madam. I bit them to death." That is what I call quick thinking.

I want to call your attention to an almost universally neglected field of education. Although a beginning has been made in some states, it is still neglected. You will pardon me if I use the statistics of my home town, because I am more familiar with them, and because I believe they are fairly representative of the situation in all our northern states. The population of Milwaukee is approximately five hundred thousand. We have in this population 142,725 young people of school age under twenty. Of these, 103,114 are in the elementary schools, high schools, colleges, and universities, public and private. This leaves us 39,611 young people not in any elementary school, private school, or the college or university. These young people are either idling at home or in employment, and are largely employed. Young people may become employed at fourteen years of age provided they have completed the eighth grade or have spent nine years, exclusive of the kindergarten, in an endeavor to complete the eighth grade. About ten thousand of these young people have entered high school, but the horizontal method of leaving high school still remains the more popular method. It is the method of failure, discontent, economic pressure rather than the vertical method of graduation.

The public has recognized that education pays in the elementary grades and has aimed to provide adequately for such education.

It has recognized that high-school education pays, and the public is committed to the idea of adequate, free high-school education. Likewise, many states provide universities as a public obligation and responsibility. For the great mass of young people still in the formative years of their lives, between fourteen and twenty, not in the grammar grades, or the high school, or the university, but out in employment, there has not been, until recently, the thought that the public had any responsibility for offering a type of part-time education that would adequately and comprehensively meet the need of this group, which is always approximately three times the group to be found in the high school, and many times the number of the group that goes to the university. It is true that night schools have been offered. But because of the inadequacy of the variety and character of the work, although the night schools have been successful in many ways, they have not reached the real heart of the problem of organizing, systematizing, and promoting education for the group which, as I have indicated, in Milwaukee numbers over thirty-nine thousand young people.

The struggle to get sufficient financial support for the public schools has seemed a difficult one, and all that those having the responsibility could undertake. The thought of going to our already tax-burdened communities for the substantial amounts of money needed to provide sufficient part-time schools for the large field I have just indicated, was an appalling one. Our school authorities seemed to feel the educational sheet must always be so inadequate that if pulled over the shoulders it comes off of the feet, and if pulled over the feet, must uncover the shoulders. We know, however, that this is a mistaken idea. We know education actually pays although it costs, and that when the subject is properly presented to any community, it may be made to see that the cost of neglect is far greater than the cost of proper provision for any essential piece of educational work. Money paid out for education is an investment which returns many times to the community what it costs. This seems like a trite statement and one that has been so often uttered that it has become a mere commonplace. It is the eternal battle which the school administrator must

fight, and he must himself believe that the whole gamut of education pays, that youth must primarily be dedicated to education. Even if the arguments were to be restricted to the merest economic phase of the question, it can be demonstrated that money spent for education in the grades, in the high schools, and in the universities pays manifold what it costs. He must believe the same to be true for organized free education for those of like age in employment.

Can this be demonstrated for the group employed between fourteen and twenty years of age, and if so, what shall we do about it? For many years trade, commerce, and industry have upon their own terms, been receiving these young people who, for whatever reason, have left school early to enter employment. There has been no way up for these young people except learning on the job, or, as it is often stated, "learning while earning." During this same period the employers, generally, have been increasingly complaining of the lack of skilled employees not only in the trades but in all lines, and of the general inefficiency compounded of lack of skill, lack of education, lack of ethical development, often summed up in the statement, "The young people of today are a degenerate lot not the equal of those of past generations."

Let us for a moment consider the mere economic, not to say social, significance of the neglect of the proper education of the millions of our young people under twenty years of age, now out of school and in employment. After that we will discuss plans for meeting the situation. The employers need these young people, and are, as has been said before, almost wholly dissatisfied with them. The employees need work and are largely dissatisfied with conditions. Gay irresponsibility, undirected and unaided ambition, discontent, stinted living, and stunted lives are the logical outcome. I sometimes wonder if business men know where business comes from. Do they realize that business is personal as guilt? That just as milk comes from cows and honey from bees, so business comes from human beings? No purchase was ever made except by human beings. It is the purchases by human beings to gratify human needs and desires that pay all the bills

eventually. These purchases set the limit of the volume of business. Great steam shovels, colossal engines, towering buildings are all paid for at the peanut stand and in the shops and stores where you buy your chewing gum. The charges for food, clothing, shelter, travel for education and pleasure, entertainment, art, music, literature, religion, and health finally pay all the bills. Things have no value in themselves. Value is conferred upon things by people in proportion to the number and quality of the people. Could I, by the wave of a wand, reduce the people of this city to the primitive status of undeveloped people, property values would fall, and our most valuable possessions become relatively worthless. By the same token, if the educational status were raised, new values would be created.

Business is mutual service mutually rewarded. Anthing else is emery dust in the bearing of business. The ability to serve, to earn, to buy must ever measure the volume to which "business" may attain. If people cannot serve, they cannot earn; if they cannot earn, they cannot buy; if they cannot buy, you, Mr. Employer, cannot sell. Is it intelligent to raise colts in such a manner that they cannot pull a load when they get to be horses? Is it intelligent, from a mere business standpoint, to so neglect millions of young people during the short four or five formative years, under twenty, as to leave them to spend an adulthood of twenty, thirty, or forty years upon a low earning and purchasing level? As well eat your seed corn in hard times, or sell your veal calves in a growing milk shortage.

Business needs these boys and girls to buy its products as men and women. They need education as a dry field needs rainfall or a barren field needs fertilizer. I would not, in speaking, neglect the civic and social significance of proper educational effort with these boys and girls, but just now we are considering only the merest economic phase.

Education for these boys and girls will pay. What shall this education be? An endeavor was made to meet the situation by the establishment of trade schools. The trade school is a full-time school. The boys who attend must go to school all day every day through a period of years. It attempts to make a plumber or

patternmaker or bricklayer, just as a law school makes the lawyer, or a medical school, a doctor. The trade schools have generally been restricted to from six to nine trades, and have drawn their students from approximately the same economic level from which the students of the high schools are drawn. Their training has been excellent, but even where most excellent, their efforts have been hopelessly inadequate because: (1) They were restricted to a relatively few trades or crafts in the community. (2) Their graduates were drawn from the before-mentioned economic level and did not continue as journeymen. (3) While these schools furnished most excellent education, they so palpably failed to supply the needs of trade, commerce, and industry for trained employees in sufficient variety and numbers that the obvious futility of this method has prevented its making even the growth which it might have made otherwise. The only other sources of trained employees have been importations from abroad and the chance successes among our own American boys, who have gone early into employment and learned while on the job.

Learning while on the job has furnished us most of the journeymen today whose skills and capacities are so much complained of by the employers who, as a class, furnished them such education as in their initial years of employment they had received. If, then, the trade school, on the one hand, as a source for training people is hopelessly inadequate, and importations from abroad cannot furnish us a sufficient number, there remains but to do the thing we should do anyway, and that is to systematize, organize, and administer part-time education during the early working experience of the young people in such a way as to rescue the situation from the present catch-as-catch-can, hit-or-miss process which is largely the method upon which dependence is placed at the present time.

The situation as described has led many states to undertake the establishment of part-time schools enforcing a minimum of compulsory attendance. Some states require one-half day (four hours) per week for those employed until sixteen years of age, others until eighteen. In our own state, Wisconsin, half-time attendance is required until sixteen, and thereafter eight hours

per week until eighteen. All this attendance is required in the daytime in all states, making such compulsory requirement. In addition, Wisconsin has a law requiring all apprenticeship of minors to be expressed in legal indenture with written contract stating the wages, what is to be taught during the period of indenture, and containing in the contract the requirement to attend school supplementary to the trade four hundred hours during the initial two years of the contract at the rate of one half-day per week. All these provisions in each contract are subject to the approval of the Industrial Commission of the State, and the contract is carried out under the Commission's supervision.

In the field of work with employed young people, the law does not limit the part-time school to vocational work, but the predominating demand for vocational work makes the part-time school essentially a vocational school. The work is largely pre-apprenticeship training, apprenticeship training, and post-apprenticeship training. The pre-apprenticeship training includes vocational guidance; employment placement; conservation of previous education frequently in great jeopardy; educational upgrading; and civic, health, and ethical education. Apprenticeship work is directly supplementary to the trades but also has for its objectives a continuance of educational upgrading begun in the pre-apprenticeship work. Post-apprenticeship work is done with our own apprentices when they have finished their "time" and with other journeymen who find in the school the opportunities for advancement in their line. The necessity for the most varied educational opportunity for adults as well as minors was recognized in the Wisconsin Law and while the provision was made that attendance before eighteen years of age should be accompanied by minimum compulsory requirement, financial provision was made for the adult members of the community as well. There is no maximum limit as to age or hours imposed beyond which voluntary attendance is not free. It has, therefore, become necessary for the Milwaukee Part-Time School to face the whole problem of adult education. Wise administration, of course, takes cognizance of existing educational institutions and makes adequate

provision first for the most pressing demands. In meeting this problem, as I have described, the work for the girls has not been overlooked. So far as apprenticeship applies in the case of girls we aim at the same provisions for these as for boys. Largely because of the demand, their school work is homemaking in its broadest sense, and the aim has been to make the best possible provision for their educational needs both general and specific.

For this part-time group in the city of Milwaukee we have erected a building at a cost of $3,500,000. At the present time we have one hundred and eighty full-time instructors handling the part-time work. We have in school all employed young people between fourteen and eighteen years of age, numbering twelve thousand students. In accomplishing this we have had the support of every social and political faction in our city. We have the support of the trade unions, of socialists and conservatives, of Protestant and Catholic, of Jew and Gentile. We have proved to our city upon a purely dollar-and-cents basis that it will cost more not to do this work than it will to do it. Our school is spoken of as a vocational school. We rarely think of it as such. Students come to us in need but often without desire. We must meet that situation. Either there is something that they need, or they do not need anything. If they do not need anything, they do not need us. If there is something they need, it is our business to find out what they need and give it to them. Under our policy nothing is in our way except our own limitations. Precedent need not control.

The part-time school means short-time contact, and short-time contact means that we have time only to do the most effective things in the best way. If we have a choice between teaching two facts, we must teach the one that is most fundamental and far-reaching. When you come to analyze the problem and see in how many different ways you can affect these young people, ways that leave them different this afternoon because they came this morning, different tomorrow because they came to school today, you cannot help becoming enthusiastic. The teachers who merely want jobs cannot live in the atmosphere of a school of this kind. They must be filled with this missionary spirit. They must be

scout leaders. They may not be able to love all the boys and girls, but they must passionately want to do something for them. Such a spirit must mark the teacher who is employed in the part-time school.

The part-time school is here to stay. It cannot be denied without denying all education. Strengthen it and you make all educational movements stronger. Let us illuminate this last dark continent of education, the employed young people of America for whom adequate educational privileges on a free publicly supported basis are now largely denied throughout the United States.

LATIN

A. W. Hodgman, *Ohio State University,* Presiding

ILLUMINATIONS IN EARLY MANUSCRIPTS FROM SPAIN

Henry A. Sanders
University of Michigan

There was a monk named Beatus in Spain in the eighth century, who was scholarly and industrious far beyond his time. Christian Spain then was a mere fringe along the north and northwest of the peninsula. Galicia and the Asturias were firmly held and the kingdom of Leon was expanding at the expense of the Moors. Beatus was first known as a monk in the monastery of Liebana, which was located in the coast mountains of the Asturias. Later he was appointed confessor to the Queen of Leon and, after the defeat and death of the king, he was abbot of a monastery, perhaps at Valcavado.

In the years before 776 he had made extensive collections of material for a commentary to Revelation. He also put much extraneous matter in the Introductions, so that it was a sort of compendium of church information. In 776 he hastily got his material into book form and sent a copy with a dedication to Aetherius, bishop of Osma, who had joined with him in a church dispute concerning the divine nature of Christ against the bishops of Toledo and Urgel. In 786 a second edition with changes especially in the Introduction was made ready, but it seems not to have been regularly published, as a blank was left for the name of a person to whom it was to be dedicated.

Both editions were profusely illustrated, often with full-page pictures, and two other works similarly illustrated are found in most copies. These are the generations of Jesus at the beginning of the volume and Jerome's "Commentary on Daniel" at the end.

The "Commentary on Daniel" has been published many times and from better sources, that of Beatus on Revelation but once,

in 1770 by a Spanish monk named Florez. This edition is extremely rare, though copies have been industriously sought for over fifty years. I know of but nine copies, of which three are in Spain, two in Germany, one each in Rome, Paris, and John Rylands Library of Manchester; and the last one I found in Spain in 1923 and bought for the Morgan Library in New York. Yet Beatus is not without interest. The many illustrations show us the development of Spanish art in most striking fashion. Then too, much of the material in the commentary is derived from earlier authors, whose works are lost in whole or in part, as Tyconius of the fourth century and Apringius of the sixth. More important still is the Bible text, which is of an Old Latin type related to the North African Fathers. It is probably the text used by Tyconius and is the more important for us as no continuous Old Latin text of Revelation is found elsewhere.

Not only is the edition by Florez unobtainable, but it was made uncritically and was based largely on two late and corrupt manuscripts. It entirely disregards the illustrations.

I have been interested in the republication of this work for the past ten years and have spent much time searching for manuscripts during two sabbatical years in Europe. So far twenty-four manuscripts have been found and studied, the more important of which will be discussed in connection with the pictures, which illustrate both text and miniatures. Both of these have to be studied in determining the age and relationships of the manuscripts. Slides were shown illustrating the following manuscripts:

1. MS Hh58 of the Biblioteca Nacional of Madrid. It is of the early tenth century and fragmentary but has lost more pictures than text. It is the best example of the edition of the year 776.

2. MS 8878 of the Bibliothèque Nationale of Paris. It is closely related to No. 1, if not a direct descendant of it. It was written in the Monastery of San Severino in Gascony in the eleventh century. The miniatures show French influence and a very advanced style.

3. MS of the Cathedral of Osma. It is related to the above in text and style, though French influence is lacking. Also the text shows considerable mixture with a second-edition form. It is late eleventh century.

4. MS 1366 nouv. acq. of the Bibliothèque Nationale is the only other one to show traces of this first edition. It came from Roncesvalles in

the Pyrenees and is late twelfth century. The miniatures though late in type show little French influence. The text is mixed with a manuscript of the type of No. 10.

5. The Valcavado manuscript of 970 A. D. now in Vallodolid. It is a pure and old copy of the edition of the year 786. The miniatures are primitive, the text marred by careless errors.

6. The Ashburnham MS is similar but older. It is now in the Morgan Library. It was confused with No. 5 by earlier scholars, and its early history is not known.

7. MS 11695 in the British Museum is a descendant of No. 6. It was written in the Monastery of Silo in 1109. The miniatures show a decided advance in style.

8. The Tabara MS of 968-970 now in the Archivo Histórico of Madrid. The miniatures were very primitive, but have now been mostly cut out. It is an independent type of the second edition, but with considerable evidence of careless copying.

9. A twelfth-century MS in the Morgan Library. It is a direct copy of No. 8, so its text has value only for the lacunae of the former. Its miniatures show decided advance in artistic ability, though less in one of the two artists who shared in the work.

10. MS 33 of tle Real Academia de la Historia of Madrid, is also independently derived from the second edition. It is late tenth century. There are two types of miniatures, one of which is a century later than the other.

11. MS of the Cathedral of Seo d'Urgel. Late tenth century. It has an interesting text, seemingly independent, and very primitive miniatures.

12. The Gerona MS of 975 A. D. is the oldest representative of a large group. Its miniatures are partly by the artist of the Tabara MS (No. 8), and show development. The text is careless but independent.

13. MS XCIII of Turin of the twelfth century is a direct copy of No. 12.

14. A twelfth-century manuscript of the John Rylands Library shows the same text but the beautiful miniatures illustrate the advance in art.

15. The manuscript of the Archaeological Museum of Madrid is also of the twelfth century and of the same family. It is only a fragment of 129 leaves. The miniatures are the best I have seen. Some twenty stolen from this manuscript are now in the collection of Martin le Roi of Paris. They were supposed to be of French origin until I identified them.

16. MS & II 5 of the Escurial. It is of the eleventh century and was once at Oviedo. It has a good text and primitive miniatures.

17. MS B 31 of the Biblioteca Nacional was written in 1047 and was once in the Cathedral of Leon. It has a mixed text of two old types and

crude miniatures. It is the largest Beatus manuscript known and the miniatures are the worst of any studied.

All the other manuscripts are later and show a corrupted text. The miniatures are careless and add little to our knowledge of the later art.

OUR INTANGIBLE ASSETS

Sarah A. Dickson
Stivers High School, Dayton

A great deal of stress has been laid of late years on the practical value of Latin in the high-school curriculum. Data have been collected showing its importance for the professions, such as law, medicine, and pharmacy, and this in spite of the fact that the professional vocabularies have very little to do with classical Latin. There has also been an effort to popularize this subject and to attract large numbers to study it. A great deal of time is thus spent in specific devices like card games, charts, and plays that might be more profitably employed in reading and gaining a first-hand knowledge of Latin authors.

The intangible values or assets of Latin seem to form its real claim to a position in the modern school. These cannot be measured by standardized tests nor plotted in curves to put on charts. Modern literature did not spring "full-armed" from the brain of any one person or set of people. Its roots are firmly imbedded in classical literature. Every modern poet has spiritual ancestors to whom he harks back. We cannot have our reading and our education predigested for us in spite of the fact that Dr. Flexner considers it unnecessary to study Latin and Greek in the modern school.

Latin should not try to compete with the more practical studies. Nor should we attempt to teach the heterogeneous mass of pupils brought into our schools by the compulsory-education law the beauties of classical mythology or literature. We should not lower the standard in order to teach everybody, and substitute "commercial Latin" for the reading of real Latin authors.

The classical department is the only part of the modern school where there is time for beauty. The art and English departments are too busy putting on plays that make money, and teaching the writing of business letters to stop to appreciate or admire the "best that has been said and thought"—or painted either. But the departments of Latin and Greek have still the opportunity to present to the pupils Greek beauty and Roman grandeur.

From the classic authors the modern reader can learn wisdom and tolerance, and can gain breadth and understanding. Our science has done little in teaching us how to live or to die. But the poets and philosophers of the past can teach us much about these very difficult arts. Catullus, Horace, and Virgil can prove to the "young idea" of 1925 that he has not discovered the last word in freedom, or, in fact, anything new about love or life. In interpreting the classics to modern pupils, our greatest need is love and enthusiasm for the classic authors. Indeed this is the *sine qua non,* for without it we fall into deadly aridity and are in danger of the dry rot of the spirit.

LATIN AND THE FUTURE

Frank W. Tear
Rayen School, Youngstown

When we consider the position Latin had in the curriculum fifty years ago and observe the present crowding of the courses of study, we are tempted to be discouraged about the future of Latin. The lessened prestige of Latin today is due to the character of the times. The age is in the first place transitional. A critical spirit is bringing its acid test to religion, art, politics, conduct, and also to education. Old concepts are challenged and as yet nothing is determined as to what may be retained in the new civilization.

The times are also material. This is the greatest of all of the periods of the Industrial Revolution. It is the age of the self-made man in the field of industry. We have no leisure to produce the intellectual type of leader. In the face of such conditions the boy feels that he is wasting his time in studying Latin.

In the third place, the democratic character of the age affects the curriculum. The increased wealth of the country gives the masses the leisure for a secondary education. As they come into our schools we feel that we must first of all make citizens of them. They are not fitted to carry the traditional course, because, in matters of the mind, there is no equality. We arrange a schedule that is adapted to the largest number and fail to see that the best ends of society may be served by putting our greatest attention upon the best students.

This is the work of those who have the arrangement of the curriculum in their power. The classical interests are left to work out their own salvation. Latin is not denied a place in the curriculum, but no one insists that it remain there. If this be true many problems must be solved by those directly interested in the classics.

An effort should be made to bring Latin into a position of leadership in the curriculum. To that end we must make the third and fourth years more varied and attractive to induce a larger number to elect these courses. Latin should replace formal English grammar in the junior high schools. We must solve the problem as to who should study Latin, eliminating some entirely, and others at the end of the first and second years respectively. The unfit do very much to bring the course into disrepute. Latin ought to be a prerequisite for most of those who study a modern foreign language. We must strive to make Latin required for entrance into all normal schools. Finally, it may well be correlated with ancient history to the extent that the Latin teachers give the instruction in that subject.

There must come an ever increasing cooperation between the secondary- and college-teaching forces. The college teachers must continue to direct and inspire the secondary teachers as they have begun so well to do, by classical conferences, service bureaus, reading circles, and by assisting in local clubs.

THE CORRELATION OF LATIN AND FRENCH

A. W. Hodgman
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This paper treated, first, the various differences between the literary Latin and the plebeian Latin, and the transfer of Latin to French in its broadest outlines. Then some fifteen important rules for the transfer were given, illustrated with familiar words showing, in most instances, three stages, Latin, French, and English.

Most of the paper dealt with correlation of forms; but a few suggestions were added for correlation inside the field of syntax. Most elementary French books absolutely ignore these correlations, namely, the explanation of the so-called "irregular" plurals in *-aux;* the reason for the rule about the past participle of a verb conjugated with *avoir.* On this subject the writer knows of no up-to-date reference book written in English; the teacher will have to consult the books of such men as Bourciez and Nyrop, then find his own illustrations that will show the English stage also, and reinforce the matter by constant drill.

MATHEMATICS

J. C. Boldt, *Steele High School, Dayton,* Presiding

MASTERING THE FUNDAMENTALS OF PLANE GEOMETRY

Robert L. Fleming
South High School, Youngstown

The discussion of a subject that has been in the limelight of mathematical pedagogy for quite a while should be both precise and accurate. Lest I should fail in my attempt in such a discussion, I shall approach it in the spirit of the aviator who was riding with a friend the other day, trying out the friend's new airship. In the distance they saw a man in a parachute and the friend said, "Hit him, Bill. It isn't very often that we get a chance at a pedestrian." Now it isn't very often that we have a chance to air our methods of doing the thing and so I am going to make the best of the opportunity.

I am, of course, placing a restricted meaning on the wording of the subject and am interpreting it as directing the activities of a group of high-school students in such a way as to make it possible for them to master plane geometry. This throws upon me as manager of one department of their academic activities the responsibility of getting it before them in a fashion that will benefit them if they devote part of their time to the business.

It is necessary to tear down the subject and then rebuild it. Analysis and synthesis are the two characteristics of a plane-geometry teacher that make him a queer individual in the sight of his sophomoric clientèle. It is hoped that as I proceed with this paper I will not be in the predicament that I was in as a child when left alone one day at home. Showing at that early age the two afore-named characteristics, I proceeded to take the family clock into my confidence. Tearing down that old clock was easy. Analysis for a lot of people means simply tearing down, and it becomes an easy appendage to their mode of life. I analyzed that

clock and spread it out before me. Such an array of wheels and bolts and screws I never had seen. But rebuilding that old clock was simply impossible so far as I was concerned, for the best thing that I could do was to finish the job with three wheels left and without three wheels that clock refused to run. Synthesis is the job for an expert.

Mastering and fundamentals make the gist of my subject. Mastering is to bring under control, to comprehend in all its details, to acquire facility in using, to become thoroughly conversant with the fundamentals, principles, rules, laws which serve as the groundwork of a system of belief. I find myself directing thirty Sophomores in a crowded school, in such a way that they will become proficient in the essentials and principles of plane geometry. Before undertaking such a task a teacher should ask himself a few questions. Upon the answers depends his ability to put the thing across.

What value is to be gained in mastering the fundamentals of plane geometry? A great many students take the subject without any thought concerning the value to be gained. Within your time and mine the student was asked outright, "Are you going to college? If so, take plane geometry." These were the correlation-coefficient days. Boys and girls were unwilling to say at the end of their freshman year that they had no hope of college, and so they subscribed to the course with the directions-say-take-it attitude.

Teachers of plane geometry lose one of the strongholds of their mathematical career, if they fail to drive home, time after time, that there are values to be gained in studying plane geometry. Turning to our "Cardinal Principles of Secondary Education," we find that the main objectives of education are health, command of fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical character. These objectives are held to apply to all education, elementary, secondary, and higher, and all subjects of instruction are to contribute to their achievement. We as teachers agree to this splendid statement of the objectives of education, but we certainly would be guilty of extravagant management of the mental factory

of a student if we were to take much time to show him in his sophomore year in high school just where plane geometry fits into the above schedule. Another splendid analysis of the values to be gained from the study of mathematics is found in the Report of the National Committee on Mathematical Requirements entitled the *Reorganization of Mathematics in Secondary Education*. Chapter II, "Aims of Mathematical Instruction," divides the subject into practical aims, disciplinary aims, and cultural aims.

Two objectives that I keep constantly in mind in my geometry teaching are beauty and power. Mastering the fundamentals of plane geometry enriches our ideals of beauty. Keats must have studied his plane geometry the day he uttered, "Beauty is truth, truth, beauty." Power is a tangible thing of which even a high-school Sophomore knows the exact meaning. He knows its value. He knows prestige is attached to any object that has power.

May I answer the question "Who?" by calling attention to the fact that plane geometry in most schools comes during the sophomore year and is taught to a group of students who have had some training in algebra. The "What?" phase of the subject has been so ably discussed in the report referred to above that for me to discuss it here would be irrelevant. I simply mention it as a step to my question, "How?"

To direct the pupil so that he can master the fundamentals of plane geometry he must be able to understand what he is working for, reason each step out, and do it in logical order. These, however, are mental processes, and in order to develop them it is extremely important that certain physical conditions be reckoned with.

The first thing that a student is entitled to in his conquest of plane geometry is a workable textbook. This is wholly under my control, and if I am guilty of putting into the hands of my class a textbook that is not a masterful presentation of the subject, then I am responsible for the product of the factory. Teaching the pupil to master the fundamentals of plane geometry is simply selling him plane geometry. I become a sales manager and the successful sales manager must have a factory equipped with

efficient machinery to manufacture his product or he cannot compete with his rivals. And, fellow teachers, we are competitors in our teaching relationships. In most schools we compete for a place on the buying list of the Sophomore. True, we have been and still are fairly secure with our best customers, the bright pupils. They are going to college and their directions say take it. But if I can read the signs of the times, sooner or later these directions are going to be written by men who are unwilling simply to say take it and who will also say, "Go to college without it." Our manager—the high-school principal—sees in us a department with over 30 percent waste and he cannot justify us in the eyes of the community which decries the expense of such a waste. On the other hand, we must teach in such a way that those pupils who want to go to college can pass the examination of an institution that does not want them unless they are head and shoulders above their idea of an average student. The upper third of the high-school class is the recruiting station for the college. If we could only take the 10 percent who will go to college in a class by themselves and the other 90 percent in a class by themselves most of our troubles would be solved. Occasional error might come from boys and girls whose thinking is under the control of parents who want to make poor mechanics out of good lawyers or vice versa.

Next to a good textbook, Johnny needs decent and workable tools such as pencils, straight edge, protractor, eraser, compasses, and a notebook. I take a few minutes the first day to talk about these things, giving specific instructions about the advantages of certain kinds over other kinds. I also see to it that the school store has on hand a supply of the kind that I want. The students that come to you having had training in mechanical drawing during their freshman year do not need this instruction except as it applies to geometry. But the larger part of your students do not come into geometry with a credit in mechanical drawing, and therefore need this instruction badly. The first day is the logical time for telling your students the tools they will need for they are in a receptive frame of mind and will purchase these tools when they purchase their textbooks. Fathers and mothers are also in a receptive frame of mind the first day, and by having

your pupils get these things immediately you avoid the criticism that teachers always want something new.

The physical equipment is purchased and the second day of school sees the work start in earnest with full-time periods. The first thing to do is to take inventory and find out why a few have not purchased their equipment. Many cases will disclose problems that you will have to deal with during the semester—indolence, forgetfulness, home conditions. It is foolish to pass over irregularities in a lump sum by telling all those who have not purchased supplies to get them by tomorrow, you repeat this homeopathic dose every day for a couple of weeks and find in the end that they must be met individually. You have a large number of pupils on your hands who are back two weeks work at the start. This means individual work to have them regain what they have lost or failure for the semester. Only four such cases out of a class of thirty means a factory running about 86 percent efficient instead of 100 percent efficient. I have always felt that I could not afford such a start and so I have been insistent about this matter of tools and supplies the first day and handled each case individually from that time until they were all supplied. The class uses a standard size loose-leaf notebook.

The next step in my teaching is breaking in the pupil and the new equipment. It is like trying to teach a person to drive with a new car, rather hard on both. I do not tell my pupils on registration day to get such and such a textbook and then study the first five pages for their lesson tomorrow. When they arrive the day after registration, and I have hastily made a check-up of equipment, I take them for a walk through the geometry storeroom. I point out an angle, a circle, a few symbols, a straight line, broken line, curved line, and with their protractors have them measure a few angles and also draw a few more of the simple things that they all know by having met them somewhere in their blocks and their games or in their work in the grade school. This is rather a pleasant diversion and Johnny feels somewhat at home. Johnny's only knowledge of plane geometry is Sister Susie's classic words, "Anyone that likes geometry is a nut," or Huck's suggestion ringing in his ears, "Boy, you'll get

yours." The next day I repeat the process, and this time we open a few drawers and show a few more geometric figures that are fascinating. About the third day we are ready for the axioms. These we take up first with numbers, then algebraically, and then, without telling him, geometrically. Possibly a week of this, interspersed with all kinds of easy exercises which use the protractor, compass, and straight edge and we are ready for the first plunge into geometry, namely, properties inferred immediately. We simply get an idea of these properties as a person would get a knowledge of a number of tools in a garage the first few days that he worked there. He certainly would not be interested in knowing how to make a screw driver but only in how to use it. We are ready for the first proposition—if two straight lines intersect the vertical angles thus formed are equal. I have thus led Johnny into the inner circles so easily and successfully that he is glad to be there, and he is now sure that Sister Susie and Huck were dumb-bells to despise geometry. He has also raised himself in his own estimation for he feels that he has an inside grip upon a subject that he has always feared. Having learned about his new machine and how to drive it, he is now ready to take a few tours with some attention on the beautiful scenery.

He must understand what he is working for. Does he know what vertical angles are? Does he know what equals means? If so, it is a small step to have vertical angles equal. Then the point is clinched by having a few simple algebraic examples, letting linear and fractional equations represent vertical angles. This completely ties up this new information for Johnny's use in such a way that it can never slip from his mind. Does this piece of information stand alone? Certainly not. Johnny has been making a classified list and has already entered the fact that all right angles are equal, all straight angles are equal, complements and supplements of the same or equal angles are equal, and now he adds to this classified list the fact that all vertical angles are equal. This classified list is constantly kept before Johnny, and his first use of any piece of information newly gained is to fit it into its proper place in the classified directory. The above pro-

cedure is followed for all information. We never let anything stand by itself. Easy exercises, constructions, algebraic examples, and number relations are all used to give the student breadth of vision for each point gained, and we keep constantly in mind the relation of this point to others gained or to the classified directory. Where can a student find beauty and power akin to breadth of vision? And where in a strange city can you find the thing you want to know so easily as in a classified directory? We do not wait for the end of the semester to make a classified list for review work. We begin in the first week of school in properties inferred and keep it up to the very last minute the class is in session.

As we advance we take up triangles, and we begin by reviewing our scant knowledge of triangles. We construct all kinds of triangles. We play with triangles for a while and every pupil gets a chance to construct his share on the board. With the class in session we go over the work that has been drawn on the board and call attention to several things. We find some triangles have three acute angles, others have only one right angle or one obtuse angle, but they all have certain things in common. We take any one of the triangles that have been placed on the board, and with the aid of our protractors we duplicate on a working line one of the base angles of the chosen triangle. With the aid of the compass we measure on the sides of this angle distances equal to the sides of the angle of the given triangle. We connect these points, and behold, the student sees a triangle equal to the given triangle. This is the best way to get across to the student the fact that if certain things are given he can work these up to other things that he wants. In the first few weeks of geometry the student is made or unmade by your capacity to get across to him the thing that is to be done. Certain things are given and with these he builds certain other things that go into the building of the geometric figure. This is true for construction and for proofs.

Does an efficient contractor put on his vacant lot all his individual pieces of lumber in finished form, and then bring in mechanics and carpenters and say to them, "Now I am sure that every piece of wood necessary for the house is here. Build it."

No. You laugh at the ridiculousness of such a situation. Yet we try to teach geometry in somewhat that fashion. The material is brought to the building as needed, and a lot of it is brought in units, such as doors or window frames. Yet we insist upon a pupil making every door and frame in the classroom, and we are making a sad error. Varied achievements in geometry belong to the skilled mathematician, yet we are foolish enough to flunk the beginner if he cannot do these things. Would you fire a carpenter if he could not, without proper tools, mill a complicated frame or column on the ground where you were building your house? Would you not dismiss the contractor for not having sense enough to go to a lumber mill and buy these necessary things? Even if the carpenter could do it, given time, wouldn't you buy material from a place where you could save yourself 25 to 100 percent of the cost? There is no hesitancy in making your choice in such matters, but we are not so clear about geometric figures. I, for one, buy from the mathematical mill any theorem already made up that I can get cheaper than my pupils can make it on the ground floor of the classroom.

The first step in teaching the pupil to master the fundamentals of plane geometry is to make him see and understand what he is working for. This is absolutely necessary. The second step is that he must reason out each and every step. But you say that if he buys all his theorems already milled, where is he to have the opportunity to reason? My answer is simple. It takes just as much reasoning power to place theorems in a practical geometric figure as it does to reason them out, and the results are ever so much more encouraging. It is more fascinating to build milled frames and sills and cabinets into a structure than it is to mill these features. Let the A pupils do the milling process, but do not fail the splendid carpenter, because he is not a cabinet-maker. Do not force the cabinet-maker to spend his time in plane geometry spiking down mathematical two by fours.

See to it that your student does it in a logical manner. May I continue my illustration and say that the contractor who builds a perfect roof first and then tries to jack it up so that he can build a house under it would be a fit candidate for a state institution of

a different nature from the one sponsoring this Educational Conference? We must watch that our mathematical students do not build their geometric figures in this fashion.

Instill into our pupils the essentials of mastering geometry. Have them know what they are working for, have them reason each step out, and have them do it in logical order. This, to my mind, is teaching them the fundamentals of successful living. Thus we teach them geometry and at the same time prepare them to take their places as fit members in the society of the community in which they live, rendering service to mankind.

SOME COLLATERAL VALUES IN THE STUDY OF MATHEMATICS

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The values to be derived from the study of mathematics are too many to be enumerated and too complicated to be described. There is one concerning which I shall have but little to say. It is about the only one that seems to be known to the non-mathematician, including some educators. It is an exceedingly important one. I refer to the value of mathematics as a tool; to its practical and utilitarian values in science, engineering, finance, and research.

Has mathematics any other values? Let us "try it out" in this way. You meet a stranger who says: "Oh, yes, I have studied all mathematics, only I didn't get as far as high school, so I never had to study algebra and geometry, which they don't teach any more, even in high school." What is your conscious or unconscious reaction? Do you not find yourself talking down to him, figuratively speaking, as if you needed to use words of one syllable? You are delighted and mildly surprised if you find this precaution unnecessary, but it will be necessary unless he has in some other way secured the kind of training these high-school courses would have given him. Have you not watched the effect of a course in algebra or in geometry, a course in fact

as well as in name, upon the mental make-up of a boy or a girl? It is no less needed in the case of a girl than of a boy. A college Freshman is very noticeably changed by even one semester of mathematics. He has learned how to extract ideas from the printed page and how to create new ideas through the combination of those already acquired. In mathematics he must read critically and discriminatingly if he reads at all. The so-called sentence or paragraph reading will not suffice. Closely associated with this power is the power of accurate expression. But few subjects in the curriculum at any stage of advancement will compare with mathematics in their ability to give the idea of the nature and necessity of exact thinking and exact expression. It also gives the finest material upon which to drill in habits of accuracy. It should be taught with that end distinctly in view. I here quote a statement made a few days ago by Miss Ruth Ealy, in the Department of English in Peabody High School, Pittsburgh:

> It has been my experience, through a number of years of teaching, that the pupils who have taken a course in geometry do much better work in Burke's *Conciliation of the American Colonies* and in Washington's *Farewell Address* than those who have not had such training. In fact, I believe the training in logical thinking which comes from a course in geometry is invaluable to a high-school student; and I am inclined to say that most English work would be better done should the high-school curriculum make geometry and other branches of mathematics required subjects.

Harvard Law School studies show that students who have had a considerable amount of mathematics and who are good in mathematics are far better students of law than those who have had but little mathematics or are poor in that subject. Whether this is due to their training in mathematics or to the possession of a mathematical type of mind is quite immaterial. Viewed in either light it indicates that the ability which mathematics trains is identical or very closely associated with the ability that makes for success in the study of law.

Dr. Walker in the *Mathematics Teacher* says:

> A few years ago the *New York Times* propounded this definition: "An educated man is one who knows when a thing is proved." That ability to

know what constitutes a proof involves, among other things, these factors: (1) a problem-solving attitude of mind, (2) a critical attitude toward data, (3) skill in analysis and synthesis, (4) ability to generalize, (5) an understanding of the converse relationship, (6) recognition of the place of assumptions in all thinking, and (7) the nature of a definition. That each of these abilities is fundamental to vigorous thinking of any kind is at once apparent. Almost daily in our personal conversation we are annoyed by illogical people who mistake a statement for its converse. An understanding of the converse relationship is essential to clarity of thinking and can be taught in a geometry class more easily than anywhere else, yet often we are in such haste to amass geometric information, that we do not give this truly important matter the attention it merits. Here is a golden opportunity to show the pupil how the type of thinking done in mathematics should permeate all his life relationships. We need more material from nongeometric sources to go hand in hand with our geometric material.

Dr. A. V. Hill, of University College, London, in an address given in Philadelphia on the teaching of physiology to students in general and to students of medicine makes some rather strong statements. He says in part:

> The most striking defect which the majority of students show is their complete incapacity to face and overcome for themselves an intellectual difficulty of any kind. They may be able to read and absorb like blotting paper; they may be able to reproduce results as accurately as a penny-in-the-slot machine; but give them a problem and they gaze at it blankly. It is unfortunate, for medicine and life will provide them later with problems enough. One cure for it, simple as it may seem and unpopular as it will be, is, I believe, to insist on the teaching of theoretical mechanics (physics) and mathematics in the schools . . . . Without a theoretical knowledge of the elementary properties of matter, all natural philosophy is moonshine. Moreover, theoretical mechanics, in an elementary way, is a philosophy in itself; it has a kind of formal precision of proof and statement, it provides certain fundamental intellectual difficulties, it is the basis of all the physics which our students must learn later . . . . If a knowledge of theoretical mechanics were required . . . . not only should we be spared the presence . . . . of students who are constitutionally incapable of exact thought, but the remainder of the students would be spared the difficulty of understanding physics without a proper intellectual basis.

The word "theoretical" as here used is significant. Dr. Hill of course is referring to mathematics and mathematics in its application to physics.

On many occasions during my acquaintance with President

W. O. Thompson, of this University, I have heard him express his belief in the cultural value of the study of mathematics and attribute to it much credit for his own success in life. A few days ago I wrote to him asking that he be good enough to give a statement which I might pass on to you. I quote the following from his reply:

I am disposed to believe that mathematics, like some other subjects, has suffered from the theory of formal discipline. It has also suffered I think in the minds of some as being simply an engineering tool. It is interesting to note that at the Ohio State University the most advanced study of mathematics is pursued by students other than engineering students. Judging by my personal contacts I should say that the qualities I have observed in mathematicians are mental alertness and breadth of sympathy. I have long felt that the power of interpretation has not been sufficiently appreciated. What is the significance of the great central fact that this universe is a mathematical universe? The recent announcements, if not disclosures, of a universe practically unlimited and yet so far as we know subject to the same laws as that portion of it which we have explored have been full of challenging interest to me. I am thinking, as you see, about mathematics in its wide sweep as developing a certain philosophy of the universe and of life. In other words I believe that the extension of our knowledge and our ability to interpret the world in which we live is a fundamental source of genuine culture. The notion that culture comes only from a limited number of subjects seems to me entirely without foundation. Mathematics, therefore, has always appealed to me as requiring a certain strength of mind, a certain consciousness, accuracy, and power that make men independent in their thinking. What I mean is that too many people become confused the moment you present to them any mathematical issue involving causes and effects. They seem to be altogether uncertain of their own thinking and of their own results . . . . Their own intellectual processes lack stability and reliability. It has seemed to me, therefore, that from the very beginning a child should be so taught in his mathematical processes as to feel just as well assured of the accurate working of his own mind as he would be of his hand in driving a nail. Within limits I find that I rarely correct my first impression as to a mathematical situation. I ordinarily make all computations while my friends are standing around. In checking up later I find very few errors. It is because, as I see it, I have always depended upon the reliability of my mathematical activities. This, as you see, has nothing to do with the question of formal discipline or of the "tool idea." It is simply a question of developing intellectual power, intellectual confidence, intellectual accuracy, and reliability of one's own judgments. These are assets which may not be found in the balance sheet of many people,

but where you find them I think you are bound to have certain elements of leadership among men and certain evidence of a refinement of perception quite desirable in any well-educated person.

If, as was recently believed, the abilities which mathematics develops cannot be transferred, then of course no other subject would have the power to develop those abilities, therefore, on the non-transfer doctrine it would follow that without the study of mathematics the mathematical ability must go untrained. If mathematical ability is worth cultivating we must have mathematics with which to cultivate it. Of course the old formal-discipline theory has gone but so also has the non-transfer theory.

Professor E. C. Hills of the University of Chicago, says:

Recent experiments, which have been made with greater skill and with more precision than those which were made ten or fifteen years ago, have shown that there really is such a thing as general training of the mind as a result of disciplinary studies. This general training is manifest in part in the development of patience, power of concentration, and habits of thoroughness. And there is transfer of power—not the complete transfer that was claimed fifty years ago, but a modified transfer to related fields.

In view of these findings the more advanced thinkers in education are again advocating disciplinary studies in the public schools—such studies, for instance, as mathematics, foreign languages, and the natural sciences. Unfortunately, a very considerable proportion of our public-school men seem still to be unaware of the results of the latest investigations in educational psychology; they oppose disciplinary studies and favor those that are basically informational. This is, I believe, one of the chief causes of the mental flabbiness of our boys and girls.

A student of mathematics soon learns that the only real education is self-education, "home-made" education. All he knows or can know about a subject is what he has actually dug out of it at first hand, encouraged by the teacher perhaps, but none the less the product of his own mental efforts. His teacher is his sparring partner, not his chauffeur. That "there is no royal road to geometry" is only too true. A wise teacher merely helps a student to help himself. A teacher may easily be so helpful that he is no good. It is the easiest way. A recent textbook remarks that mathematics "can be made plain but it cannot be made easy." To realize that this is true of all things prized in the intellectual world is of inestimable value to a student. He will form the habit of independent study and escape being a victim of the

"get-knowledge-quick" and "get-knowledge-easy" quackery. He will come to resent assistance on anything he is mentally capable of doing for himself. He should develop the willingness and the expectation to work and finally, a real love for work.

The newer pedagogy has been misunderstood by many teachers, elementary, secondary, and college. They have interpreted the reorganization programs as calling for relaxation in standards and painless methods rather than as what they are; revisions in subject-matter and changes in emphasis. There was never any thought of requiring of the student less work but rather more work.

The ability to concentrate is a direct result of the study of mathematics. The habit of sustained concentration is almost the whole secret of knowing how to study. Gaylcy says in his *Idols of Education*: "Of these procedures that which demands mental concentration in the highest degree develops best the ability to grapple mentally and morally with the manifold problems of life."

The idea of mastery and the habit of approximation to mastery are among the most important and most valuable aids to success in life. In mathematics this result is more definitely and consciously attainable than in any other subject. The ability to generalize and to appreciate generalizations is a most desirable factor in the intellectual life of any individual. Where else than in mathematics can one gain so specifically and so clearly the idea of generalization? Where, except through the mathematical point of view, can one secure so clear and so positive an idea of the immutability, the harmony, the immortality of the laws of nature, or gain a clearer insight into the nature of law?

Physics is the natural and about the only laboratory for mathematics in the secondary school. It is, therefore, very unfortunate for mathematics that the high-school courses in physics, and the college courses as well, are becoming more and more de-mathematized. This is a double loss to mathematics: first, as an opportunity to use it; and second, as an incentive to study it. Physics should not shirk one of its most important functions, that of reteaching and reinterpreting algebra and geometry;

otherwise, the chances of success in more advanced courses in both physics and mathematics will be greatly reduced. No subject is ever mastered by its direct study alone. Before anything like the mastery can be secured the next more advanced course in the subject must be studied. Every teacher should remember this. In college we normally expect that a student will learn more elementary algebra in the study of trigonometry than he learned in the high school. The same is true of trigonometry when he studies analytic geometry, of analytic geometry when he studies calculus.

There are two remaining values that I wish to mention. They are, in my opinion, the most far reaching and worthy of all, and values that only mathematics can hope to teach adequately in the secondary school. They are the nature of the foundations of knowledge and the laws of logic. I believe that this is possible. The thought is not to reach these most difficult things directly or fully. But the study of algebra and geometry should give a definite conception of the nature of an axiom, a postulate, a definition, and a syllogism. The student should fully appreciate the meaning of the statement that all of our so-called facts with which and about which we reason, are wholly inferential. He should become conscious that reasoning is not infallible. He should lose faith in the printed page. He should see clearly that proof by analogy is no proof at all and that "insinuendo" is a covert appeal to prejudice. He would thus, in some degree at least, be fortified against propaganda. The schools and colleges prescribe one year of biology for the express purpose of giving an insight into the natural law of evolution. Mathematics can and should play the same rôle with reference to the laws of thought and the foundations upon which all reasoning must be built. As an aid in doing this the subject-matter of mathematics would serve as the simplest and most appropriate illustrative material. The teacher of mathematics ought to have as a background a clear understanding of the laws of pure logic and of the nature of the so-called foundation of mathematics and a knowledge of the history of the development of our present-day mathematics. He should have read and mastered J. W. Young's

Fundamental Concepts of Algebra and Geometry. At some appropriate time, picture for each class such an example of non-Euclidean space as is described on pages 14-25. You will find that a surprisingly active and intelligent discussion will develop. Such an experience can and will everlastingly and most profoundly affect the reasoning and thought of the child. If he is at all able to grasp the idea, his imagination will work and his teachers will hear from him again with questions that may tax their own imaginations. Don't be afraid that you are wasting time, for it is worth much time. Is there any opportunity in any other subject comparable with this for real values and inspirational possibilities? Again, read to your classes at appropriate times pages two and three, on the nature of a proof in that it has to do, in its last analysis, with undefined terms and unproved propositions. Shake the blind faith, of all who have any faith to shake, in all proof. Show that non-mathematical reasoning, if there be any such reasoning, is based upon far more precarious and indefinable assumptions than he will use in mathematics, that these assumptions are often mere prejudices and may be self-contradictory, that no two people will agree on any subject because they are basing their reasoning on wholly different assumptions, and their conclusions are equally valid or should we say non-valid, that we are what we believe, that dogmatism and intolerance are the result of the non-appreciation of such facts as these. Show what Keyser means by the phrase "logical fate and intellectual freedom," and what Korzybski means by the statement "mathematics does not claim to be true but to be correct." As a teacher do not fail to read Keyser's books; *The Human Worth of Rigorous Thinking* and *Mathematical Philosophy* and Korzybski's pamphlet on *Time Binding* and later his forthcoming new book on *Human Engineering.* Take your classes again and again around the "circle of proof" and around the "circle of definition." Show them by concrete examples from everyday thinking what is meant by the "circularity of knowledge." Fix in them the habit of initially rejecting every assertion pending, of course, its critical inspection by their own trained force of mental inspectors. Is there any other subject

that can compare with mathematics in its suitability for use in an effort to cultivate this most desirable habit? Make it clear that most false conclusions in daily reasoning are due to false premises rather than to false logic. One's philosophy, which is what one believes, constitutes his set of axioms for determining his conduct in life. If these are bad, no matter how flawless his reasoning, his conclusions will be unsafe. We might say, almost, that "the better his logic the worse his conclusions." Is one reponsible then for what he believes and how he believes it; in other words, for his "axioms" of life? I believe that there is nothing for which he should be held more responsible. He should know what his axioms are, and that axioms are in the last analysis mere assumptions and prejudices. He should examine and revise them daily in the light of humanity and with reference to consistency, sufficiency, and human desirability. He should be constantly and definitely conscious of the fact that the other fellow's axioms are almost certainly different from his.

He should be led to realize that in all of his reasoning he is continually using undefined terms; that there are terms that, in the very nature of things, cannot be defined; that one or more of these undefined and indefinable terms must ultimately be used in any effort to define any other term we may wish to use; that these undefined terms as well as the defined terms may have very different meanings in the minds of different individuals. Try defining such words as space, time, distance, direction, equal, one, straight line, point, angle, parallel, perpendicular, and note the necessity of undefined terms, the impossibility of absolute definition, and the tendency to "define in a circle" without taking that fact into account. Make it clear that the definition of a mathematical term is in general far more satisfactory than the definition of a non-mathematical term. Illustrate by numerous exercises and examples. Do not fear that such a procedure will do any harm. It cannot do harm. It may do much good. It will do much good if presented by a teacher who clearly appreciates and understands the significance of the ideas in question.

Make clear what is meant by the inferential nature of knowledge, for all of our knowledge is made up of inferences.

Make it clear again and again that we do not directly know anything; when we say that we know we mean that we have inferred; we mean that the impressions that have come through the senses, sight, sound, touch, and taste, have led us to certain inferences, which we call knowledge. Our inferences are, therefore, at the mercy of our senses. Furthermore, we cannot know all about even a single object since every object has an infinite number of attributes. We cannot know all of these. For any given object we know only a very limited number. The attributes of a given object that are known to one observer may be, and usually are, very different from those known to another observer; they may be even wholly different. The two observers will know the object by the same conventional word, but this word will have different meanings, different definitions, to the two observers. Words are abstractions. "They are the height of abstractions." The technical words of mathematics are far simpler abstractions than are the common words of everyday life. They are far more definitely definable. Contrast for example the ideas represented by the words equation, circle, and even function with those represented by such common words as tree, apple, animal. Just what is a tree? To fully define a tree you must completely enumerate all of the attributes that must be present, all of the attributes that must be absent, and all conditions that have to do with attributes that may be either present or absent. Try your definition on a farmer, a botanist, a child of Christmas-tree age. Is the word tree concrete? I think you will agree that it is a colossal abstraction; an almost infinite generalization.

Could anything be more helpful in bringing about universal understanding and universal peace in the world than a clear realization that the other fellow may be reasoning with a different set of axioms, a different set of undefined terms, and a different set of definitions? Can mathematics be so taught as to aid in accomplishing this end? I believe that it can and that it should. I believe that it falls short of one of its greatest possibilities if it fails to take advantage of this opportunity. Of course we do not believe that mathematics is the only subject having possibilities of this kind, but we do know that it has all of these values

in a high degree and some of them in a degree not possible to any other subject or combination of subjects.

Now who should study mathematics and when should he study it? It is almost unanimously agreed that every one should study some kind of mathematics till at least the end of the ninth grade. Beyond this the answer to the first question will depend upon three things: his mental ability to understand and profit by its study; its probable total value to him, direct and indirect, present and future; the degree in which it will add to his value as a citizen. In other words, if the study of mathematics will do him more good than a like amount of time spent in any other way then, of course, he should surely study mathematics. I sincerely believe that, in addition to the required ninth-grade mathematics, one year of more or less formal and applied algebra, and one year of demonstrative and synthetic geometry, if properly taught and diligently studied, would be possible and would be of almost inestimable value to at least three-fourths of the boys and girls who continue in high school for even three years. If a boy's intelligence quotient is too low to profit by algebra in the ninth or tenth years and by geometry in the tenth or eleventh years move them on one or two or even three years. Give him algebra in the tenth year and geometry in the eleventh year; or algebra in the eleventh year and geometry in the twelfth year; or, in an extreme case, give him a general course in algebra and geometry together in the twelfth year. If somewhat formal mathematics is as difficult as some educators think there surely can be no embarrassment in calling it a junior or a senior subject in the case of one who does not arrive at the requisite maturity at an earlier age. If he can profit by the study of these subjects at any time during his course he should be urged to take them. Mathematics is a subject that cannot easily be and seldom is studied alone, outside of school, or in after-school days. If he can profit by its study while in school there is no better way to expend his time and effort. If rightly taught and rightly studied, it will have a more profound and intellectualizing effect, directly and indirectly, upon his after-school life than, probably, any other subject in the curriculum. There is no more important subject in the

curriculum than English, but after all, which is to be preferred —good English and poor reasoning, or poor English and good reasoning?

The minimum requirement of every boy and girl capable at any time during the high-school course, of taking, with reasonable understanding, the subjects of elementary algebra through quadratic equations and plane geometry, should be those subjects. The course should include quadratic equations since linear equations can teach nothing of double or multiple possibilities. It should include two equations with two unknowns since a single equation cannot show how two or more conditions limit possibilities. There should also be included not a little of the mathematical theory of probability on account of its usefulness as a type of everyday reasoning and as a tool in everyday life. Without a knowledge of this theory the ideas of uncertainty and contingency are wholly unquantitative and unscientific. Include also a study of the simplest principles of the mathematical theory of statistics, including the graphical representation of data and something of the probability or frequency curve.

All of these topics are most interesting, but more than that, they can be so taught as to greatly aid and safeguard a man's thinking and greatly stimulate and encourage original thinking. They create and supply the technique for the understanding and successful attack of numerous practical daily problems. These subjects are all comparatively easy. Why stop a student in mathematics before at least this much has been accomplished, given of course that he has the requisite ability? I have recently become thoroughly convinced that when a student makes a poor showing in mathematics the chances are more than ten to one that it is not due to serious deficiencies in ability. It is highly probable that it is due to remediable causes, such as a mental complex about his lack of mathematical ability, inadequate preparation in the prerequisite courses, poor study habits, or disinclination to work. The present generation of students does not agree with Mr. Dooly when he tells Mr. Hennesey that "It don't matter much what ye study, Hennesey, so long as ye don't like it."

I feel that an intelligence quotient must be pretty low to make it excusable to advise against taking any kind of even mildly formal mathematics. It is further true that many who have failed in mathematics have profited more by the study of that subject, if they have worked hard, than by the study of some other subjects in which they have higher marks. It is easily conceivable that a student who has failed a course in mathematics may have accomplished more relatively and profited more by the course than have some of his classmates who have passed it. What subject if rightly taught would be more justly entitled to even double credit when finally mastered? It is not a matter of credit at all or of what is easiest to learn or of what is easiest to teach; it is pre-eminently a question of what is best for the student's subsequent intellectual life and for the community in which he will live. The word failure is in many cases a misnomer. In mathematics, on account of its prerequisitional character, a failure must be given, no matter what the accomplishment or how faithful the effort, so long as the attainment is not a sufficient preparation for the next more advanced course in that subject or in a subject in which mathematics is used. The nature and amount of the preparation in one course in mathematics needed in the next higher course naturally, automatically, and almost ruthlessly defines the minimum attainment that may be honored with a passing mark.

The major premise of so many educators, that "an F is invariably an evil, wholly undesirable, and without value" is, in my opinion, an entirely false premise. An F may be, on occasion, psychologically and educationally, the most valuable mark that can be given. It has awakened hundreds of students of my acquaintance to a new determination to overcome difficulties. It has produced careful and critical introspections which have resulted in a degree of mastery of themselves and of the subjects studied that would otherwise never have been possible to them. I have never yet had to fail a really worth-while student having even a trace of an intelligence quotient who could not be easily made to see the desirability of repeating the course and the beneficence, even, of the mark. I have had many such students

come to me a year or two later and say "That failure was the best thing that ever happened to me in college. When I took that subject over I really began to see it and I learned how to study. I have never had any trouble with mathematics since." For a teacher to give a student a passing mark when he should have a failure is as dishonest and as reprehensible as it would be for a doctor to order his patient to fast when his patient has anaemia. Our concern should be not merely how to make high marks but to do what is best for our students.

In closing, may I say, be proud of your profession, teaching; be not ashamed of your subject, mathematics. When attended with success this combination leaves nothing to be desired.

INCREASING THE INTEREST IN THE STUDY OF MATHEMATICS

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A widespread belief exists that there is a greatly decreased intellectual interest on the part of students in our high schools and colleges in recent years, especially mathematics. Conceding this fact the problem that faces teachers of mathematics is how to increase the interest in the study of their subject.

The most important factor is, of course, the teacher; and the first and most important qualification of the teacher is thorough preparation in subject-matter. The teacher must not only know thoroughly the subject-matter of the course he is teaching but he must also have a perspective that will carry him up to the work in the courses that are to follow. He must possess a mastery of a relatively extensive field so that he may have that enthusiasm for his subject which is born of extensive knowledge. It is safe to say that at least some of this enthusiasm will be transferred to the students.

In the second place, the teacher should continue to be a learner. It is only by insisting that he himself attack some strange and

difficult material from time to time that he can retain the student's point of view. The teacher who ceases to be a learner can hardly hope to retain the proper humility and sympathy and is almost bound to become a mental snob.

A knowledge of the ways in which mathematics is related to industry and business is very effective in increasing the student's interest in mathematics. It is here that many people say the teacher fails. The teacher cannot hope to increase the interest in his subject unless he is an unceasing student of psychology, especially the psychology of the adolescent.

A teacher well prepared in his subject who continues to be a student of mathematics and its applications, and of the psychology of the adolescent will not go far wrong in his methods of teaching. He will be sure that drill comes after the processes are thoroughly understood. His motto will be "It is better to teach a little mathematics than a lot of hieroglyphics."

Makers of curricula must help the individual teacher if the interest of students is to be increased. Both psychological and logical demands must be heeded in the organization of the material. The present movement towards correlation of topics in the various branches promises most help in this direction. Especially encouraging is the work now being done along this line in the junior high-school courses. I think the senior high-school teacher of plane geometry in the next few years is going to appreciate very highly the background of geometrical information the students will have when they come to him.

Two criticisms are often made of the correlated organizations that have been offered in the various texts, and it would seem with a certain degree of justice. The first is that students are encouraged to do a great deal of puttering over trivial details and the second that there are entirely too many topics included in a year's work. The right sort of correlated mathematics does not encourage puttering any more than any other type of organization, and there is nothing in the idea of correlation that means we must try to do four years' work in three. Let us make use of the idea of correlation as a help in making our mathematics more concrete; but let us not at the same time handicap the

movement by attempting to teach an unreasonable amount of material in each year's work.

Since students are going to devote less time to the study of mathematics than formerly we must divest it of all technical terms that do not really make the subject clearer. I quote from W. D. Reeve in an article in a recent number of the *Mathematics Teacher:*

> One would hardly need the advice of a psychologist to discover that the teaching of mathematics would be easier if we could get rid of much of the deadwood, unfortunate terms, and symbols. A careless and often meaningless use is made of the words "transpose," "cancel," and "clear of fractions." . . . . A blacklist should be made of all such terms and they should be discarded by all of us as soon as possible.

Then, too, much more careful provision must be made for individual differences in our students. There must be some arrangement made in the daily program of studies whereby it will be possible to classify the students into A sections, B sections, and C sections and to permit of frequent reclassifications throughout the year. More individual instruction must be given. Dr. J. W. A. Young has said, "If the pupil could have his individual mathematics lesson as he has his individual music lesson, not one out of a thousand would fail." A substitute must be found for the general study hall where one hundred or one hundred fifty students supposedly study any subject they choose but where many of them merely waste their time. There must be found a way of grouping the students according to the subjects they are to study with a teacher of that subject for a supervisor.

Lastly, some interest in mathematics may be instilled into our students by a judicious use of the history of mathematics, mathematical recreations, and a concerted effort to give our mathematical departments a little publicity. We must be careful in using such devices, however, not to mistake the shadow for the substance. There may be an interest aroused but it may not be a real interest in mathematics.

In a recent address Professor Leib, of the Connecticut College for Women, named five pitfalls in algebra which I wish to quote:

1. The humanizing pitfall. Under the supposition that we are human-

izing mathematics we are giving the student many trivial applications in a field or fields of which he is ignorant.

2. The enriching pitfall. Under the supposition that we are broadening the student we spread out our courses over a wide range, instead of making for enrichment by deep digging over a short area.

3. The pitfall of wrong objectives. We should not eliminate the hard work to make the class average come up, or let our courses be steered by the college-entrance examinations.

4. The pitfall of too many rules. A rule is easy to teach, but it is the hard-taught principle that is of value.

5. The one-way pitfall. We should stress clarity of thought without regard for a fixed method or predetermined stereotyped program of course procedure.

MODERN LANGUAGE

E. F. Hacker, *Ohio State University,* Presiding

THE DRY BONES OF LANGUAGE TEACHING

Stephen H. Bush
State University of Iowa

As I look back to the days which I passed as a very stupid and naïve student who thought that all of his instructors were monuments of learning and even of wisdom, I remember quite distinctly that, uncritical as I was, I found the works which I read magnificent and the exponents thereof singularly dull. I supposed that they were all so profoundly immersed in the works of portentous importance, which they would one day give to the waiting world—which in fact some of them have done—that they could not be expected to open their treasures to callow youths. I hope for their sakes that this was true. Anyhow, as for the time spent in class, it seemed to me then, and it seems to me now, a dreary waste. I leave to one side, of course, certain splendid exceptions. But if I could have made regular reports on what I was doing and had been allowed to commune with books in the comfort of my own room, away from forlorn classrooms heavy with boredom, I should have got on, I think, quite as well at least, especially if pursued by the stalking spectre of coming examinations.

I have no reason to suppose that the world has changed since my student days and that now all teachers are stimulating their students in a new manner, even though they all have to pass under the hand of the professional educationalist. For myself, I have a large department to look after, and I confess to a notion which in sober moments I discount, that with us it is quite different. Our classes give something to the students which they cannot get out of books. It may be and then again it may not be. But I still think that by and large in the United States, our

foreign-language classes both in literature and language leave a great deal to desire.

Why is it, above all in such a study as literature, which of all subjects ought to be actually exciting to the students, as they see before them the books written so often with the very heart's blood of the chosen few of the world's great writers, that we should have dull classes? These students of ours are going to decide the future destinies of the nation. They are the hope of the future. They may seem frivolous, sometimes dishonest, and often deplorably stupid, but it is on their shoulders that the weight of future responsibilities is going to rest. There is something here which is worthy of inspiring any man. What are we going to do about it? Are idiotic classes a medium for the transmission and stimulus of thought? Are we going to be content merely to inject into their brains a certain amount of information, as exact as possible, found in textbooks? Is all their real living to be done outside of class? Is all their real thinking beyond bare acquisition of material to be done in spite of the time which we take from them in their formative years? Is Professor Robinson right in maintaining that most teaching inhibits learning? Have we any responsibilities beyond maintaining a quantitative standing? Is there something inherently stultifying in the democratic-aristocratic atmosphere of the classroom?

I heard an eloquent address touching a little on this theme some time ago. A well-known scholar listened to what was said. At the next meeting he rose in his place in high dudgeon. He told us that what American students needed was exact information. In minute, careful, exact facts, rigidly impounded, lay the entire teaching problem. If we placed our whole effort there, it was all that mortal man could do; and it was the one crying need of American intellectual life. To me that is the point of view of the pure intellectual to whom, beyond the cold life of ratiocination, nothing important exists in our universities. Emotional life cannot be denied, but the schools have nothing to do with such a will o' the wisp. Let our students get that side of life elsewhere, but not ask us to stir up anything.

I agree with Professor Robinson that this insistence is one of the reasons why professors as a species have no standing in the active life of America. That is why in general the world never asks our opinion except on matters of fact. I believe heartily in the intellectual life, but I cannot think that we must stop there. I even believe that such a man as the one I have quoted must be represented in our universities. I do not doubt that his work has the stimulus and the value of a cold morning douche. But a douche cannot last all day. This man and his kind have a place but not as the Sanhedrin.

You all see of course what I am driving at and probably already some of you are preparing to have me give a hot blast on the other side. You are probably thinking that you are in for a lot of vague generalities about personality, inspiration, enthusiasm in the classroom. I confess with due humility that I am going to indulge in further generalities. I am not going to deny my gods and will admit frankly that what inspiration and help came to me from classes in college may have been in a few cases from the cold douche, but that most of it was from the other type of scholar. And I object to anyone trying to cut off the title of scholar. My difficulty in going on lies in the fact that I do not want to swim up just now into the empyrean, even hand in hand with Beatrice, and express heavenly ideals in fine broad terms which have nothing to do with the daily task of the plain high-school teacher. Hell is usually the favorite resting place of the readers of Dante, and even his mighty genius could not quite give us complete joy and understanding when he got beyond the shadow of the earth. I am trying something difficult, because I want to be concrete and avoid the gibes which the worshippers of the hard round fact throw at those who scintillate in the manufacture of phrases.

Having progressed thus far, I want to take breath and permit myself to say that teaching ought to be a glorious and joyful affair. If a teacher is bored his class is arch-bored, hyper-bored, suffering chronic pains down the backbone. If he enters the classroom with a sinking feeling at the pit of his stomach and a gloomy view of the spiritual and intellectual character of his class, in the name of all that is holy and respectable, let him flee

from the wrath to come, leave town and do something else, whatever the future may be and whatever the loss of dignity, and whatever the danger. Men and women do not starve in the United States, and I should think that some teachers whom I have known would be deliriously happy if they could only change their supposed dignity and their position as teachers for the honorable professions of iceman, barber, or taxi-driver; cook, dressmaker, or cafeteria waitress. They would also make more money.

I really do not want to go on casting pearls of generalization into the air without attempting something effective and concrete. There are of course general negative principles not peculiar to language work which I cannot help mentioning, not because they are new, but because they come into the class of things which everybody knows and few practice. Just as we know that money does not confer happiness, but everybody spends his life as if he were convinced that it is the only thing which does. There is possible a formidable list of don'ts for teachers which I sometimes inflict on my Department in the enthusiastic days of September when they are best able to bear it. The list is a sort of *Carthago delenda est* with me:

Don't ask questions alphabetically.
Don't call a name and ask the question afterwards.
Don't ask long questions.
Don't let a class look bored and wriggle.
Don't ask for rules but examples.
Don't break into pronunciation work by stopping students in the middle.
Don't ask questions answerable by yes or no.
Don't let a collection of bolshevists gather on the back row, seat the class alphabetically.
Don't let the class leave empty front seats as if you were preaching sermons.
Don't look out of the window, never take your eyes off the students.
Don't give a single set of examination questions in a crowded class and then complain of dishonesty. Give two sets.
Don't suspect everybody and act as if the students were there to cheat you, even if you know that half of them are.
Integrity begins at the desk. Don't bluff.
Play square with the class. Only then can you ask the same of them.
Don't think of teaching as a science—it is an art.

Don't scold and never get angry or cross. I shall never forget my suffering under the lash of bad-tempered men and I have not forgiven them yet for being, as Dante says "sullen in the bright world when they ought to have been joyous." A certain round, red-nosed, pot-bellied merry little man with a voice like a file and a diabolical passion for making small boys unhappy, used regularly to make me wish that I were dead and buried as he leveled at my bewildered head his horrid shafts to the shouts of laughter on the part of the other little sufferers, grovelling before his gleaming spectacles. Peace to his ashes, he had dyspepsia. Every living teacher, I imagine, has lost his temper at a class, expressed himself as violently as his command of language and public decency allowed, only to regret it bitterly afterwards. These are our usual sins.

The classroom has a dreadful atmosphere of conventionality. Break it up. Don't follow an obvious routine. Turn the lessons backwards, upside down, and inside out.

Be regular and follow your own routine, but as musical composers do in their art, twist your motifs, reverse them. Like the Absolute, conceal your plan. Don't assign to classes work never afterwards taken up. I could never understand this exasperating little trick.

Since I was not created a humorist the next don't is easy for me—don't make the painful teacher's jokes unless you simply have to do it and cannot resist. If it helps to cheer up the teacher, I suppose joking must be allowed, but it is dangerous.

The value of an elementary teacher is in inverse proportion to the time he occupies himself. Don't talk too much. Almost every living teacher does.

Don't give explanations of the lesson. I began my own distinguished career by giving each morning a beautiful exposition, intelligently worked out, of the great principles embodied in the lesson confronting us. Thereby I permitted the bright students to avoid work and prevented the stupid ones from having to recite. We do not learn by hearing things said, but by saying them ourselves. It was not until I began to inquire regarding the lesson entirely from the students that it dawned upon what I call my mind that those before me were not all idiots. I was engaged in "idiotifying" them myself. The idiot was on the other side of the desk.

In speaking of jokes I did not mean to exclude a sense of humor. Nothing breaks the conventional classroom atmosphere like the natural humor that drifts up from teaching like the smoke of a good cigar, including humor at the expense of the teacher. Don't take yourself too seriously. In teacher's questionnaires the sense of humor of candidates ought to be always included.

Don't be afraid of your dignity and don't freeze your class by a portentous manner. Students are naturally self-conscious. Anything which can make everyone easy in his mind, ready to take part, even to the point of

interrupting the teacher, is worth while. A teacher has such natural advantages of position and authority that he should be extremely careful of the rights of his class. Natural bullies exist even in our somewhat timid profession. Timid men and women suffering under their own superiors, have been known to take out their grudges on the hide of their own temporary victims. I was told by a colleague lately that a mere student rose in his place in one of his classes and expressed right there before everyone a doubt as to the correctness of a statement made by his instructor. My colleague received him *dans la belle manière.* "Look here, Mr. Blank," he thundered, "I have been teaching Engineering for twenty years and if I do not know what I am talking about better than you do, it would be pretty funny." The next time that this boy's mind moves it certainly will not move in public. Give the students their rights as human beings, even if you do wear the awful mantle of the teacher. Happily the mind is free, even in universities and high schools. Try to forget all your superiorities. In some cases, though, as I shall have to add, forget and strenuously deny to your soul, all your fancied inferiorities.

These scattering remarks do not apply particularly to language work. They apply equally to classes even in the newest and most vital of our courses of today, such as for example, "Educational Problems in the Handling of Grandparents Over Eighty," or "The Use of the Feet in Walking," or any other of our new essential courses in business, education, or hygiene.

I agree with our enemies, the pure educationalists, that our classes are under the prime necessity of seizing hold of the interest of the students. If I trust my memory, I should say that at least five hundred victims of our requirements have presented themselves before me in my time with the consecrated words, "I never could get foreign language," or "Language is always hard for me." Perhaps if they knew that the intellectual tests correlate better with language grades than with any others, they might hesitate before they gave themselves away. At any rate these expressions may exasperate me, but they are interesting for what is behind them. Sometimes it is ignorance of our mother tongue, sometimes it is a hoodoo, called in psychological lingo a complex, sometimes it is nothing but laziness or real dullness of mind, and in one case out of hundreds it is a poor boy who may have parts, but who is genuinely blind, deaf, mute, and halt in language. I have known of just one absolute case of a man

who has made a brilliant career in psychology and whose language aptitude was of this sort without assignable reason.

In many of these cases the teacher has doubtless not known how to get the student properly started. How can we inspire interest where it does not exist? Like most things really worth while, including marriage and happiness—not referred to as synonyms—interest cannot be captured by a direct attack like an ice-cream soda at a drug store. Perhaps this is going too far, because popularity can be captured and perhaps a subject can be annexed along with personal popularity. Only if a teacher sets out directly to captivate the devoted interest of his class, he is inevitably going to make such sacrifices to gain his ends that he will lose everything else worth while. He will be seeking the false loves that the medieval philosophers talked about. The purpose of our class must be clear, and the matter of interest is only a means to an end. Even young students feel that there is something wrong when a teacher seeks only to be personally interesting and popular. I hardly know a single case, out of many which I have known, of a teacher who did this and did not in the end lose the respect of colleagues and students alike. Such a teacher veers off in all directions following his own caprices, and those of his students. He tells lively yarns, he cracks jokes, he indulges in interesting bits of autobiography for their own sake, he compromises with his intellectual conscience every hour, and while verily he hath his reward, he finds himself in the end without the reward for which he really longed.

The only secret of vigorous class interest lies in the profound interest on the part of the teacher. He has to take a vital interest in the class personally but above all in the subject. He has to give his best thought to that subject. If he is teaching elementary French, by whatever method, he must weave it into his own best thought. While he cannot wander off into disquisitions on France and French literature, he can still make everything worth while that has interested him in the country, the literature, the civilization, act as a handmaiden to the teaching of the language. An illustration, a short subordinated personal incident, a comparison

between the two countries may at any time throw a flash of vital human interest over everything.

The whole crux of the matter is found in the word subordinate. When the instructor ventures beyond the text for a moment, it must be incidental. It must be illustrative. It must not be to give the teacher a chance to show his wisdom, his wide experience, his interesting travels. Grave men objected to *Tartuffe* on the ground that the hypocrite does the same things and uses the same words as the saint. Hence to use the hypocrite in literature might damage the true faith. That cannot be helped, however, and *Tartuffe* has outlived all its detractors. Exactly the same distinction applies to the good teacher and the popularity hunter. Both constantly use the same methods and words but with different emphasis and purpose. Thus such things are dangerous and also vital. They stir up in the class new interest in the subject rather than the professor, they serve to reinforce a point to the degree that it may never be forgotten. We do not remember things because they are expounded in lucid fashion, but rather because there is some appeal to our emotions and our imaginations as well as to our intellects. Victor Hugo gave a famous illustration of the lack of right emphasis which I speak of, in his work *William Shakespeare* in which a colossal Hugo indicates far in the background a tiny Shakespeare. But I am sure that when a teacher has the capacity to connect his teaching in a properly subordinated and illustrative manner with his own deepest interests, the class learns and loves to learn. Years afterwards the students are apt to remember what was said. I think that our test in fact should be, not merely how good an examination is passed in June by a class well stuffed with facts by a remorseless taskmaster, but much more. How much will they remember five years later? How many were so seized upon by the worth of the teaching that they maintain a perennial interest in the subject? I look back on some of my classes with gratitude for their strict, clear, vigorous teaching. I look back to others and recognize that somehow, without the teacher letting go his grip on the plan of the course, I got a *je ne sais quoi* besides. I found something both intellectual and active which

applied in my life. What I learned in the subject remained as part of my active thinking.

There is no formula or set of simple principles for a good teacher. He must of course have a real sympathy for the individuals before him. He must above all have a profound knowledge of his subject. Nobody can teach decently without having his subject as an integral part of his life. One has to eat, drink, sleep, live his subject. One must have his work in the back of his mind in all his reading, in all his thinking, in all his intercourse with his fellow mortals. This is far more important than any number of hours spent in graduate classes, than degrees and theses. If our teaching is often poor it is not that our teachers are inferior but rather that they are not bound to their work. There are too many persons who are teaching for a year or so before the great goal is reached, to wit: marriage and lifelong relief from the necessity of earning a living. You have to know something—how commonplace is such an idea! Yet I feel it worth mentioning that knowledge is the heart of the thing in these days of education with a capital E and statistics everywhere waving at us to bend us down before the god of technique.

It makes one think, to go back not very long ago, within the memory of men still living, when research and educational machinery did not exist. American students then practically never entered a library. All the education of serious men was represented by the study of textbooks and the work of the teacher. Our greatest universities opened their libraries only a few hours a week, and often no books could be withdrawn. In our university a professor died not long ago who was for some time the librarian. The task was nothing, for the library occupied but a few shelves in his office. Yet in those really benighted days there was an education which marked its men. To judge of this one needs only to realize from representative books that the use of the English language then was at least as effective as our own, and the viewpoint nearly as broad. The teacher then was the exponent of a dignified art to which he gave his life. That at least the older teacher did with all his ignorance of what we call scholarship and pedagogy.

I do not think that a teacher needs to put much thought on how to get vital things into his classes. Either they get in or they do not. Effort seems to make little difference. If a teacher binds himself over as a slave to his work, the things which come to him as he studies and lives will inevitably work their way into the very organism of his class. They will be inseparable from his teaching. They will thrust themselves inexplicably into his most elementary work and illuminate it.

I do not mean that it is a mistake to emphasize the technique of teaching. When I first entered a classroom in the capacity of a teacher, I not only knew next to nothing about the subject, but I had never exchanged a word with anyone on how to do the thing. When I asked timid questions, people told me to go in and win, like a small boy in a street battle. Nobody seemed to think that there was such a thing as technique. I had no plan and for many weeks was in a sort of agony lest the whole business should blow up and leave me in a miserable heap on the ground. No teacher today has this experience. A rather naïve remark which I once heard from a Doctor in Education represents crudely our tendency. This poor man proudly declared that although he had never studied any language, he was capable of teaching them all because he had carefully investigated the methods by which they should be taught. Even in football this is not so. Hardly a well-known coach can be found who was not in his day a great athlete, and this is not accidental.

A teacher must study his own personality, his own likes, and dislikes. As I already remarked teaching is not a science at all, but an art. No method is good by itself. Voltaire's remark, *tous les genres sont bons, sauf le genre ennuyeux;* applies to all that we do. One must choose the style which suits his temperament and his character. Technique is always there of course. Technique exists in everything and has to be learned whether you are teaching, painting a house, or opening a can. You must have a technique of your own and the more you know about that of others the better, if you do not let it run away with you. I do not mean to say that any method is good, provided only that you like it. Teaching is a difficult art. It is only the more

difficult, because there are no exact formulae, no absolutes, no final methods, no god-given, statistically proved way to go about it. It is an art which one never quite masters any more than golf. The least slip, the least complacent notion that you know the game, and you are beaten. Every golf player has had this unhappy experience. Every teacher worth his salt has to renew himself constantly. The best imaginable method which fits like a glove to the hand of any teacher becomes dust and ashes as soon as a teacher relies upon it, drops back, and expects to see past triumphs simply repeat themselves. It is almost an alarming prospect, in fact. The teacher who respects himself realizes that his success depends not in the last analysis upon learning the subject as well as he can in college and graduate school, but on being alive and always at work for nine months of the year if not for twelve. The job requires physical training and nervous fitness like a quarter-mile race. It demands character and sympathy. It takes a sense of humor, eternal vigilance, and eternal industry. We have to be professional readers and professional thinkers. We must have even some of the qualities of the salesman, and in the end like the great artists, we may look upon the picture which we have painted and know that we have only half done the job.

Of course in this sermon I am scolding those who have not come to church. No doubt those who have taken the trouble to come to this meeting are very much alive, but I still think that it is worth while occasionally to consider the broad essentials of language teaching. So many of our teachers' meetings are only golden opportunities where our eternal egotism enjoys the rare pleasures of pedagogical autobiography. We have to pay for the satisfaction of doing this by submitting to the autobiographies of our colleagues, but we find it worth while just the same. I have often enjoyed this sport myself, but I have arrived at the patriarchal age when the autobiographies of others give me more pain than my own disquisitions give me pleasure. So I have ventured upon these generalities. But may I insist that what I have been saying is not a disguised glorification of what I imagine myself to be achieving in the classroom. It represents only what

I see glittering above my head in the pure atmosphere of the ideal.

We have made a god not only out of technique but also out of research. Many a man who would have made a wonderful teacher, who has in him the capacity for something better than scholarship—that is wisdom—has been wrecked by the ideal of minute scholarship and been set to producing pages of worthless print in learned journals. Although deans of graduate schools preach it as an axiom it is quite unproved that minute investigation of facts, the usual revered research of our day, is the one method by which a teacher can keep his soul alive. Few of the great research scholars have been great teachers. Exact scholarship is splendid, but why make the production of pages of exact statements of no practical interest to anyone, even scholars themselves, the *sine qua non* of our profession? High-class research is a very rare thing. How much of it has ever appeared in our subject in the United States in spite of the gushing stream of doctors' theses? We do not ask all college professors to be great poets—thank Heaven—because we recognize the impossibility of the thing. When we ask all our good students who wish to teach to become research men we go too far and seek false gods. Even high-class literary criticism has been obliged to bow before this invasion of the scientific spirit into our midst. The minute investigation which is the very breath of life, no doubt, in chemistry and physics is not necessarily the great thing in literature and language. All subjects cannot be measured by the same yardstick. Science is already great enough, and it is a pity that its stupendous shadow threatens to fall over the whole earth. There is a valid distinction between art and science and where it is out of place science can do no good. No one questions that science rules properly part of our work, but it will never be master of the house.

When we overemphasize research spelled with a capital letter, we cannot demand other things which are indispensable. We should have a thorough knowledge of the spoken language and the literature, of the actual countries, their civilization, their history, their intimate natures. The task of a language teacher is formidable. To be really prepared, one ought to live for

several years in the land of which he teaches the language. He should speak it fluently. He ought to know the literature of all the important periods—and not through *morceaux choisis*. He should be equipped with the philology, the phonetics, the history, and the geography. No one can do this without as many years of training as the doctor must have, for example, before he is unloosed upon the public. No wonder that we with our small pay and limited time as well as our remote situation, cannot compass the task. It is remarkable that there are so many devoted and conscientious teachers who have accomplished so much of this large program. We have an endless and fascinating task. If I have spoken severely of our shortcomings it is not that I have an easy cure-all, a neat formula, a brand-new method of attack.

I am in sober earnest somewhat alarmed at the prospects for the teaching of modern languages in our country. It is so difficult to be competent that there is some danger that we can never get teachers really able to do the work if it is to be done well enough to be worth while at all. A large percent of our students leave us with practically nothing gained. Our shortcomings may become so apparent that we may lose our standing and be squeezed out of the curriculum, in favor of other subjects better handled or easier to handle. And we will not be the ones to decide in the last analysis. All the methods, all the technique, all the degrees and research courses in the world will not give us what we want—teachers of foreign languages who know and who can inspire others to know.

It is hard to conclude when there is no conclusion. I wanted to indicate merely the seriousness of our teaching problem. It is much larger than a matter of pedagogical methods. We ought to approach our work as seriously as a religion and with an equal integrity. I believe that the world needs our work because I believe that upon the question of international good understanding depends our national existence from decade to decade. Good will on earth is not so much today a Christian theory as an economic and political necessity. We have a better chance to promote this than teachers of other subjects. We should do

more than to impart so much linguistic knowledge. Before the war such words would have seemed chimerical. Now they are plain common sense. We have a great task not unconnected with the advance and preservation of our civilization. We have made particularly in Romance languages great advances since the war, but we do not need to feel that our ambitions are clipped because there is so little left to accomplish.

NON-BIOLOGICAL SCIENCE

SETH HAYES, *East Technical High School, Cleveland,* Presiding

NEW LIFE IN OLD CHEMISTRY

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Perhaps you have heard the story of the gentleman who killed a turtle in his yard one summer afternoon and to make sure of it, he cut off the turtle's head. An hour later he returned, and in spite of the fact that he had severed the head from the body the tail still wriggled. He explained this matter to a neighbor who had called to see him and a heated argument arose as to whether the turtle was really alive or dead. An old German friend of theirs happened along at this time, and they appealed to him to decide the question. "Now," said he, "led me see. You say you cut off der turtle's het aboud two o'clock, but his tail still viggles, und you vant me to decite whedder der turdle is alife or det. My obinion is, dat der turdle is det, but he don't know it."

I am not a pessimist. I do not believe that high-school chemistry is dead. But as teachers, there are many ways in which we unintentionally are retarding the progress of high-school chemistry and are helping to kill it, and it is mandatory that these faults be corrected.

We deplore the lack of good teachers. It is not only true in the small high school where one must teach several subjects, lead an orchestra, coach a football team, and fill out his schedule with a class in chemistry, but it is far from ideal at the other extreme in a large city high-school system where a specialist in botany spends his life teaching physics, where another who has majored in mathematics is appointed to teach chemistry, and one who has spent seventeen years as head of a Department of English is assigned to teach typewriting, shorthand, and commercial geography. The attempt to teach the teachers how to teach chemistry is a progressive step worthy of our support. There is a vast

difference between having a knowledge of chemistry and being able to impart that knowledge, but that one must first have that knowledge before he can impart it cannot be challenged. It is a shame that many new teachers must blunder along for years making mistakes of which they could have been forewarned by teachers of experience. More than ever before great business men recognize the necessity of training their salesmen in salesmanship. There is much of good salesmanship involved in good teaching.

Texts are too cumbersome. Several of recent date contain between six and seven hundred pages. It would take two years to cover this adequately. There is but one way to complete such a text—to omit half of it, and that is not satisfactory. I cannot cover more than four hundred pages thoroughly and am compelled during the second semester to omit the summary, exercises, and review questions at the end of each chapter. This also means that little time is spent on the metals, and the subject of organic chemistry is barely mentioned. It is unfortunate that the pupil who may never again study chemistry should have this distorted view of the field.

Progress is retarded by using a text not suited to your pupils. This is a matter which we cannot always control. The teacher of experience will adapt his text to his pupils, but the younger teacher is not so daring and confident. As scientists, we must face the facts. Probably fifty percent of the pupils studying high-school chemistry are Juniors and have not studied physics. More than a quarter of a century ago Dr. J. Alexander Smith, who probably had no superior as a university teacher of inorganic chemistry, said "that chemistry must be preceded by physics and must therefore be taught in the senior year." The committee recently appointed by the American Chemical Society to consider the correlation of high-school and college chemistry suggested that we "encourage chemistry being placed in the senior year after they have had a year of general science and a year of biological science, or physics, or both."

Some progress has been made in this direction in the past thirty years. The course now taught in general science to our Freshmen does a great deal to interest pupils in chemistry, and to

help them to understand the physical phenomena involved in chemical changes. Our progress is retarded by the fact that the pupils have not had a year of physics. But as long as the mathematics and quantitative experiments in physics make the course so much more difficult than chemistry, conditions will not change. Many of my best pupils are Juniors and we cannot overlook the fact that four of the six scholarships to Yale awarded by the American Chemical Society for the best essays in the national contest were won by Juniors.

For several years I have used a text written by high-school teachers who should know the capacity of a high-school pupil. Their explanations of chemical theory are impossible of comprehension by the pupils. I tell the pupils to read it but that I do not expect them to understand it and when they come to class I will try to tell them what the authors intend to say. The prestidigitator says "the more you look the less you see." I say that the more you read of this, the less you know. It is said that the animal called the squid carries an ink bag in his body and when he is attacked and liable to capture, he muddies the water with this solution and in the confusion escapes the enemy. I cannot think otherwise but that this particular author in these particular matters, plays the human squid.

Laboratory experiments that are too difficult and give unsatisfactory results after reasonable care, especially if placed at the beginning of the course, do more harm than good. The second week let the pupil find the percent of oxygen in the air by sticking a wire in a piece of phosphorous, inverting an eudiometer filled with air over water and inserting the phosphorous on the wire. Let it stand overnight. Happen in the building about midnight as I did, see the phosphorous catch fire, see the air expand, due to the heat generated, and escape from the tube, and when it cools to room temperature the water takes the place of the overheated air as well as the place of the consumed oxygen. When your conscientious pupil makes his measurements next day, wades through the mysterious application of Boyle's and Charles' law, including the correction for pressure of water vapor and differences of levels, he gets thirty or thirty-five percent of

oxygen when he knows it should be twenty-one percent. If, to reward him for his painstaking effort you tell him this is not satisfactory and must be repeated with more care, you will have something to explain to him to get back his confidence in the accuracy of scientific methods. Should he survive this, a few weeks later try him on the "Determination of the Concentration of a Solution by Titration," and you will be lucky if the turtle now beheaded still retains sufficient vitality to wiggle his tail.

I have before me a copy of the *School Review* for October, 1897, containing an article prepared by the department of chemistry at the University of Chicago, from which I quote verbatim, "attention should be given to symbols and nomenclature (with careful avoidance of stress, since these are nonessential)." I emphatically disagree with this and also say that most texts fail miserably here. If you do not understand valence you cannot write formulae. Without nomenclature you cannot interpret them. Without formulae you cannot write equations and, therefore, cannot predict what might reasonably be expected to happen in a given reaction nor can you account for what is taking place before your eyes. Neither can you reason how to prepare certain materials if wanted, nor can you so easily remember how things are made. Without your equations you cannot solve problems for your data, for the problems come from the equations.

I know that a knowledge of these things is appreciated by high-school students. In fact there is a point at which they demand to know these things. They can easily be taught to the average high-school pupil, and these steps of instruction follow as logically as night follows day. The class will take on new life and feel that it has a real grasp on the situation. We drop laboratory work and spend all recitations and laboratory periods for three weeks at about Christmas time on the development of these fundamentals, and no one is given credit for the first semester's work until he can pass a satisfactory test on them.

One text devotes but one paragraph to ionization and hydrolysis, chemical equilibrium, and mass action, and says that these are interesting subjects but too difficult for the high-school pupil. Several others include from eighteen to thirty pages on these

topics. There is evidently a lack of agreement in these two extremes. There is a tendency to overdo these subjects at the present time. Times and conditions change. A few years ago we were warned not to attempt to teach pupils anything about the structure of the atom. We didn't know much ourselves at that time, but papers and magazines have mentioned these so frequently that the pupil's curiosity must be satisfied. It is difficult but hardly more intricate than radio, and many boys of twelve or fourteen in five minutes can floor the average high-school teacher of physics with questions on radio. I had studied physics under the famous Dr. Milikan and had taught high-school physics seven years. My young son was entering high school. I did not pretend that he could tell me anything. He came home with $2.00 worth of junk he had picked up from the boys, began to string up the house with wire, and in a few weeks the chandeliers were spitting fire and I almost had nervous prostration for fear the house would burn down. He also irritated me very much by talking about such things as grid leaks, amplifiers, cat whiskers, vacuum tubes, and variocouplers, and he asked me questions that were embarassing. He was a Sophomore in high school who had never studied physics, using a language entirely new to me. It wasn't long before he had completed an eight-bulb superheterodyne set. He said, "Dad, what do you want to hear?" I said, "Give me Los Angeles," and he tuned it in. Dallas, Davenport, Cuba, New York City, and Washington are at my beck and call through the boy's dabbling in things I thought he could not understand.

I did not come here to complain of our chemistry teaching, but to bring you something constructive. What can I suggest that will help to put new life into old chemistry?

I have just tried to show you what an average boy can do if he is really interested in his work. It's an old saying that "You can lead a horse to water but you cannot make him drink." But you can give him salt and make him want to drink. Interest is the salt that creates a thirst for knowledge and a desire for work. Davy, Faraday, Newton, Watt, Galileo, Darwin, Huxley, Edison, and Pasteur had it. One of my favorite teachers put it this way,

"God never inspired a lazy man." Show me the man not interested in his work, and I will show you a failure.

Know your pupil. The first day have him fill out a blank giving his name, age, class rank, whether or not he has studied physics, why he is studying chemistry, what college or university he expects to attend, if any. File these where you can get your finger on them at a minute's notice. They are a great help in making a personal contact with the individual.

Create the proper atmosphere for chemistry study the first day. Confront him with quotations on the wall emphasizing the value of all knowledge and the joy of labor. "It is your privilege to know." "Finding out is fun and work is living." These are silent sermons and will often stay with him. I find them written in their texts. Pupils meet me after years and say, "I never shall forget some of the mottoes on your wall." Place permanent display cards on the walls of your recitation room and laboratory emphasizing the practical uses of chemistry. "A knowledge of chemistry is an aid to good health." "By applying chemistry, Rockefeller saw millions in crude petroleum oil." "The chemist has run the food fakers to earth." "Baking powder, the leaven of civilization, is a product of chemistry." "Millions of dollars are saved annually because the chemist gave us the fire extinguisher." "A match is a little thing, but a very convenient one." "Pure granulated sugar is the chemist's greatest contribution to the world's dietary." "Chemistry has placed the royal purple of the ancients on the bargain counter." "The chemist has embalmed the voices of Caruso and Galli-Curci in carbolic acid." When Dr. Slosson visited us he said that he thought it was a fine idea.

Have photographs of the eminent chemists on the wall to which frequent references are made, Priestley, Lavoisier, Boyle, Dalton, and Faraday. When studying their work, associate the men with their labors. Make them personal and intimate friends. All of us are inspired by association with the masters. As a teacher, you yourself must be interested in your work. Interest is contagious.

Compel the pupil's confidence in you from the first as a man

and a scholar. You cannot lead those who have no confidence in you. Be neat, be firm, be fair, be honest, be honorable, and have a sense of humor in awkward situations. First impressions are often lasting.

Take advantage of everyday's lesson and drive it home with applications to everyday life, to the town, to commerce, to industry. This is live chemistry.

Live chemistry must mean chemistry learned so that the pupil is interested in it and becomes more intelligent during the process. It must be chemistry or it is not what we are discussing. It must be alive or it is not education. It therefore must be both.

Connect the work with the pupil's present knowledge, advancing progressively from the known to the unknown. Being accustomed to the language of chemistry we forget that although this is English, it is in a sense a new language to the pupil.

You may congratulate yourself that you see through things quickly, but you are not thinking them through—you already know them. Shift to zoology with which you are not so familiar and see the difference. If I state the proposition thus: "If there are more cows in the world than there are hairs in any cow's tail, then there must be at least two cows with the same number of hairs in their tails." You cannot remember just what I said, to say nothing of seeing through it. But if I say: "If there are more atoms in the world than there are different atomic weights, then there must be at least two atoms with the same atomic weight." You see it and believe you thought through it, but you already knew it. As a good teacher, you start on the cow problem thus: suppose there are just four cows in the world, and that is more cows than there are hairs in any cow's tail; then one cow would have one hair, the second two hairs, and the third, three hairs. Obviously the fourth cow must have either one, two, or three hairs in her tail, and at least two cows would have the same number of hairs in their tails.

Give the pupil only what he can assimilate with a reasonable effort. To complete the text is by no means a necessity. A clear understanding of valence, nomenclature, formulae, and equations is essential. Impress the fact that chemistry is as definite as

mathematics. There is no half-way ground. A conclusion is either right or wrong. In chemical changes every atom is accounted for. A study of atomic structures makes research work more definite. Material for which you can show no good reason should be omitted. Adapt the work to your community. There is a local chemistry which no text can give, which few teachers know, and fewer teachers teach. The following methods may interest the community in chemistry.

Lectures may be given to pupils on "Some Interesting Chemical Experiments," "Soda Water," "The Air We Breathe," "The Water We Drink," "The Food We Eat," "The Clothes We Wear," followed perhaps by a series of practical experiments on "Tests for Food Constituents," "Water Analysis," "Milk Analysis," "Tests for Adulterants in Foods," "Soap Making," "Testing Cloth Fibers," with a written report on investigations made at home on food, cloth, and labels on canned goods, in place of the regular monthly test. A board of food inspectors may purchase foods in the local market, test them under supervision, and hand in written certified reports of their findings.

Lectures before boys' clubs, men's clubs, and women's clubs, on such timely topics as "Adulterants in Foods," and articles in local papers also help. Keep a bulletin board on which are pasted photographs of noted living scientists, articles taken from magazines and newspapers, jokes, cartoons, everything pertaining to chemistry or the value of an education. This is not only chemistry up to date, but up to the minute. Require each pupil to read Dr. Slosson's *Creative Chemistry* before the end of the first semester. Probably no book of any time has done so much to interest the masses in chemistry.

Compete in the prize essay contest conducted by the American Chemical Society. It can do no harm and will be of great benefit to those who take part in it. During the second semester, read the *Life of Pasteur* by Radot as an illustration of the method and work of the world's greatest scientist, or write an essay of at least two thousand words on some subject in which the pupil is interested.

Use project work. In every project on a small scale, the pupil is duplicating the method of the master in solving his problem. Life's problems are solved in exactly the same way.This is best emphasized in the chemistry exhibit. It is not a chemistry show but about the most serious piece of work the teacher can undertake. The following points should be emphasized:

1. More than five hundred persons come to the exhibit where not more than four or five visit the regular recitation and laboratory work during the year.
2. It is interesting to the teacher as well as the pupil, and he learns more from it than the pupil.
3. It gives a number of boys and girls an opportunity to show their ability who do not ordinarily take part in public affairs or in athletics.
4. It acquaints the community with the splendid equipment and facilities of the chemistry department.
5. It impresses the public with the practical value of chemistry.
6. The pupils take pride and pleasure in doing and explaining these things, creating a new and practical interest in chemistry.
7. Parents and teachers meet under most favorable conditions.
8. It increases the enrollment materially.
9. The best things that have ever been said in the public press about me and my work have been said by those who visit this exhibit. The value of such unsolicited praise in its influence on the community is immeasurable.

Good laboratory equipment, kept in good repair, the neat and orderly arrangement of bottles and experiments, abundance of supplies with which to work, and prompt correction of notebooks are aids in maintaining interest after you get it.

Remember that there are three parts to the recitation; examination, instruction, and drill. Examination discovers whether the pupil has done his duty and prepared the task assigned and whether he understands it. Instruction helps him to see clearly what he does not understand and tells him something he does not know. Drill, by repeating facts and reviewing principles, drives them home and makes them stick.

Know definitely what you are trying to do and work definitely toward that goal. Through the recitation I expect to give the pupil a working knowledge and understanding of chemistry and through the laboratory I expect to develop sufficient self-confidence for the pupil to turn to an experiment, read it, get his

supplies, construct the apparatus, make the experiment, see and understand what is going on, and write up an intelligent, logical report.

To put new life into old chemistry you must not only know chemistry and love to teach it but you must also live your chemistry. The pupil will catch your enthusiasm and will realize that it is a privilege to know; that it is a wonderful world in which he lives; and that the world was not built by chance. He will understand the world better and will, therefore, be the better fitted to live in it. His mind will be on things worth while and to him finding out will be fun and work will be living.

EXERCISES ILLUSTRATING THE LAWS OF COMBINATION BY WEIGHT

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For several years the Department of General Chemistry at this university has been actively engaged in collecting and developing laboratory exercises illustrating the elementary physico-chemical side of general chemistry and intended for students having a background or prospective of elementary chemistry. The exercises here recited cover some of the facts explained by Dalton's atomic theory and involve the determination of equivalent or combining weights, molecular weights, and the simplest exact formulae of certain compounds.

A working knowledge of the stoichiometric values conveyed by a symbol and formula may be obtained by reasonably careful study on the part of the student. Laboratory exercises designed to teach the student how these stoichiometric relations are derived are well worth while, both from the chemical and manipulative viewpoint.

A multiplicity of similar exercises for use in presenting the same fact is pedagogically sound when conducting large laboratory sections. Our sections are divided into smaller units for regular laboratory work. When studying the subject of equiva-

lent or combining weights, this subdivision of the section makes convenient the assignment of similar exercises to the different small units. When the exercises have been completed the units are assembled under the instructor in general charge of the section and the various unit problems are discussed with the section. The instructor then points out wherein the principle, law, or theory—in this case, the Law of Combining Weights—covers the various assignments. This procedure emphasizes, to the student, the scope of the law and lessens the likelihood of leaving with him that impression of the law's narrow breadth, which is frequently the result in the single exercise method of assignment and discussion.

Teachers of general chemistry are also confronted with the problem of the student who is obliged to repeat the course. Regardless of whether a student's failure in chemistry is to be attributed to his lack of interest or incapability in the subject, he is, naturally, not inclined to repeat the same set of exercises with a pronounced manifestation of zeal. This is particularly true if he obtained satisfactory results in the previous pursuance of the course. In many instances, a new and slightly more difficult exercise, not only adds to the student's laboratory knowledge of the fundamental chemistry involved, but often causes him to view the subject in a new and more enthusiastic light.

In the subsequent enumeration or description no attempt is made to assemble the exercises in conformity to the classification given above. The following subdivision of the first class—equivalent or combining weights—is illustrated by the exercises listed: the equivalents of (1) non-metals, (2) metalloids, (3) mono-, bi-, and trivalent metals above hydrogen in the chemical-activity series; and (4) mono- and bivalent metals below hydrogen. The instructions for the performance of several of these exercises are well presented in any standard laboratory manual.

1. The equivalent of hydrogen is found in terms of the combining weight of oxygen by the Berzelius and Dumas method. From the same data the student can also calculate (a) the equivalent of copper and (b) the simplest formula for water. The exact formula for water can be deduced from a determination of

its molecular weight by absorbing a known volume of dry steam, under known conditions, in $CaCl_2$.[1]

2. The equivalent of carbon is obtained by causing a sufficient volume of dry oxygen to combine with a known weight of activated carbon and absorbing the resulting carbon dioxide in soda-lime. Knowing the weight of the carbon and the carbon dioxide, the oxygen in combination is found by difference and from this data the combining weight of carbon is calculated. The simplest formula for carbon dioxide can also be worked out from the same data. The molecular weight of carbon dioxide is determined by absorbing a known volume of the gas, under known conditions, in soda-lime and this information is then used in arriving at the exact formula for carbon dioxide.[2]

3. A method for the determination of the combining weight of chlorine in terms of copper has been developed in this laboratory. The copper from a known weight of anhydrous cupric chloride in aqueous solution is precipitated by zinc (sheet). As a small amount of basic chloride of copper is also formed, the mixture is made barely acid by the addition of a drop, or so, of hydrochloric acid near the completion of the reaction. The copper is removed by ordinary filtration, washed three times with water and twice with alcohol. One or two washings with ether is an appreciable aid in the subsequent drying of the precipitate. The filter paper is then removed from the funnel and spread out to permit rapid drying. If the dry filter is previously weighed, the weight of the dry copper is readily obtained. An optional method for getting the copper perfectly dry is to ignite the filter containing the copper. If the latter method of drying is employed, the filter paper should be of the ordinary variety—of known ash content—as the silicous matter formed during the ignition acts as a jacket in preventing appreciable oxidation of the copper. If an ashless filter is used, the copper should be completely oxidized. After knowing the weight of the copper, the weight of the chlorine is found by difference. The combining value for chlorine

[1]Evans, William L. "The Vapor Density of Steam," *Journal of Chemical Education.* 1: 152-53, September, 1924.

[2]Evans, William L.—in an article accepted for publication by the *Journal of Chemical Education.*

is then calculated. The simplest formula for cupric chloride may also be derived from the same data. (Unpublished). Thus far this exercise has not proved satisfactory in the hands of inexperienced manipulators.

The value for chlorine is also found by causing the moistened element to unite with a known weight of freshly precipitated silver. If the reaction proceeds too slowly, the temperature may be increased as high as 100° C. Care must be exercised if this is done as the chlorination may take place with explosive violence. In any event the temperature should be kept well below the fusion point of the silver chloride formed in the reaction. (Unpublished).

4. The equivalent of silver in terms of oxygen is obtained by decomposing a known weight of silver oxide.[3]

5. Chapin[4] has devised an excellent method for determining the valence of sodium. The method consists of having a known weight of the metal, contained in a capsule, liberate an equivalent quantity of hydrogen from water.

6. The determination of the equivalent weights of magnesium, zinc, tin, and aluminum on the basis of hydrogen is made by displacing a measurable volume of hydrogen from either hydrochloric or sulphuric acid by a known weight of the metal.

7. Many of the metals are readily oxidized, either directly or indirectly—decomposition of the nitrate or hydroxide—which permits an easy equivalent attainment with oxygen as the standard. This is particularly desirable for tin and antimony.

8. The value for zinc may be obtained in terms of copper by precipitating the copper from an excess of certain copper salts, as copper sulphate, in aqueous solution by a known weight of rolled zinc. This scheme is a slight modification of the one generally employed. The procedure for removing, washing, and drying the precipitated copper is the same as that described under 3. (Unpublished).

9. The vapor density methods for the determination of the molecular weights of H_2O and CO_2 are outlined earlier in this paper.

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[3]Chapin, W. H. *Exercises in Second-Year Chemistry.* New York, John Wiley and Sons, 1922. pp. 21-24.

[4]*Ibid.*, p. 33.

10. A simple but excellent method for obtaining the molecular weight of sugar with one of Raoult's Laws as the underlying principle has been developed by Walton and Krauskopf of the University of Wisconsin. The method involves measuring the lowering of the freezing point of a known volume of water, in contact with ice, by a known weight of sugar.

The same method is utilized in showing the abnormal lowering of the F. P. caused by electrolysis, for example, sodium chloride. This experiment also serves for the quantitative introduction of the Ionization Theory.

The above compilation and extension of quantitative laboratory exercises will suggest to the reader many more of like nature, as it has to those conducting the work in general chemistry at this university.

SOME PROPLEMS IN TEACHING CHEMISTRY

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In education as well as in business and industry we are passing through an era of reconstruction. The teaching of chemistry is adapting itself in subject-matter and method of presentation to meet new aims. The older textbooks in chemistry were merely simplified college texts. The course was too full of theoretical matter and too abstract to function efficiently in the interpretation of the experiences of everyday life. Since a small percent of our high-school graduates enter college, there is not much justification in those high-school courses which are primarily preparatory for college. Former United States Commissioner of Education P. P. Claxton puts the matter thus:

> The science teacher and every high-school teacher should forget that there is such a thing as a college. Year after year students build up a pile of required units without the reinforcement of contact with real things and without any reference to what is in the minds of the children. I cannot see why we should learn anything unless we purpose to put it to some practical application.

The one thing then that the high-school course should do first,

is to give the student an understanding of those factors which affect his everyday life. Every high-school graduate whether he goes to college or not, has to be a good citizen and has to live in close relation to other people under a complex system of rules and regulations where science is a very important factor. He must have an understanding of the fundamentals of science which will help him to interpret the natural phenomena which affect the health, wealth, and happiness of the individual and the community. In short, he must be socially efficient. A high-school course in chemistry should give an understanding of the chemical phenomena which affect daily life and a sufficient grasp of the fundamental laws and facts of chemistry to enable a student to carry with success the more advanced work in college courses. This era of reconstruction has manifested itself in such new texts as *Chemistry in Everyday Life, An Applied Chemistry, Practical Chemistry, Chemistry for Boys and Girls,* and the excellent text whose authors are from our own state university, *Chemistry and Its Uses.*

This period of transition gives rise to many problems, a few of which I shall briefly discuss. Perhaps the one that makes the greatest appeal to us as teachers is the use of the recitation period. Should the common practice of using this time for a mere repetition of the material learned in the text continue? In using this plan, the question and answer method, nothing new is provided for those who have learned their lessons and interest is lacking. The recent writers on method advise that the class work and demonstrations by the teacher should be organized about definite problems, and that the problem should be the real unit in science instruction. They urge this plan because it gives training in the scientific method, which leads to reflective thinking. Instead of the old style of recitation, the teacher should raise questions which keep the pupils actively thinking. This does not mean, however, that quizzing to test preparation shall be eliminated. The recitation might be called a class conference. The pupils meet in the classroom to confer with one another and with the teacher, criticizing one another's ideas with reference to a problem in which they are interested and the solution of which

they desire to find. The teacher should not be the only one who asks questions. The pupils should have their full share in questioning one another and the teacher; and when questions are raised they should be answered by the pupils rather than by the teacher. The teacher should answer only those which could not be answered without involving a great loss of time.

Twiss, in *Principles of Science Teaching,* gives a concrete illustration of the problem method in beginning to teach the topic of heat in physics. After some preliminary questions about building fires, to arouse the curiosity of the class, the following problem is discovered. "How to start a fire in the furnace in the fall without getting smoke in the house." From this simple problem is developed the whole subject of heat. Neither the text nor any other book is used for the first few days. The teacher should use his judgment as to the proper time for the use of the text. At the close of this topic the pupils make an outline for the final review which contains all the subject-matter usually taught under this subject.

Perhaps no better formula for teaching science has been given than the Herbartian steps in teaching a unit. There is no better test of this method than to take some real teaching unit and attempt to organize it in such a manner that it will result in a natural procedure on the part of the pupil. This means that at the start the topic will be introduced through some practical, strange, or environmental motivation. Questions will be asked by the teacher to excite the curiosity of the pupils, experiences will be reviewed toward a common end, and problems will arise in the minds of the pupils.

Now comes the second stage, which we may call presentation. The teacher will give a clear concise presentation of the topic, following the preparatory stage. This will be accompanied by demonstrations and illustrations. The teacher will not attempt to present all there is to know about the topic, but will give only a view of the important points. Questions will follow in great numbers if the presentation is well done. These questions will lead to individual study, experiments, and assigned readings. The teacher's work is to focus the attention of the pupils to

definite, directed study. This gives the pupil a real conception of the real problem unit.

The third step is individual study by the pupil. He will experiment, read, and consult authorities to gain such information as he needs to solve the problems that have arisen. Pupils will take notes from laboratory work and readings. Additional experiments and readings will be furnished for the brighter pupils.

The fourth step will consist in testing the results of the study up to this time. Any points which are still unlearned are made clear and the teacher ascertains that the pupils are ready for the final step by checking the results of the pupil's work in assimilating the subject-matter of the unit.

The student should now organize what he has learned. He wil write a complete report or make an outline of the topic. He maj be asked to present this report or outline, or any part of it to the class. This last step is the real test of complete mastery of the subject, and if given without notes it is better than an examination.

Another problem at the present time is the adaptation of class instruction to differences in capacity. The present method of teaching usually results in a great waste of time. The brighter pupils can accomplish much more in the time given, while those of less capacity are pushed along so rapidly, that they comprehend very little of the subject-matter under consideration. Statistical measurements show that in a class of ordinary size, given the same amount of time, the brightest pupil can accomplish two to five times as much as the slowest pupil. This condition offers a serious problem in science teaching which might be solved by assigning only the minimum essentials to the slow pupils, and additional supplementary assignments to the brighter pupils. These assignments should be carefully thought out in advance.

Sometimes the extra work could be assigned from another textbook. The teacher usually has a supply of these on hand and they could be well used for this purpose. Pupils could be sent to the school library for work on subjects assigned, or to industrial plants to secure information on certain topics. They should then be required at a specified time to give the result of

their investigations in talks to the class. These talks will usually interest even the slowest pupils for the basis of the understanding of the subject has been gained in the minimum assignments they have prepared. A few weeks ago when the topic under discussion in chemistry was the compounds of nitrogen, some of the pupils were cited to the *Scientific American* for articles on this topic. Fortunately at this time an illustrated lecture on "Muscles Shoals" was given at the Engineers' Club in our city. The pupils attended this lecture and as a result of their investigations gave interesting reports to the class.

When the subject of calcium carbide and acetylene gas was under discussion, some literature of the carbide works at the "Soo" was given to a bright boy. This pupil became so interested in the commercial preparation of this substance that he asked permission to construct a miniature electric furnace for the purpose of trying to make some of this compound. His work was so successful that he made about a teaspoonful of carbide. Another pupil became interested in water softening when this was a class topic, and on being given some literature on the Columbus water-softening plant, asked permission to work this out in the laboratory. These boys gave their talks before the class and used the apparatus they had constructed. These last two instances illustrate the project method, for a real project must originate in the mind of the pupil.

A problem that has always been difficult to solve for science teachers is the best use of the laboratory period. In the past the real purpose of laboratory work has been to drive home and make permanent what has been taught in the recitation, and we can safely assume that the majority of teachers still have this purpose in mind. In confirmation of this view I quote from a text on chemistry published this year in which the author states in the Preface:

> When the beginner finds that by experimenting, the statements that he is learning from the printed page are true, he feels the thrill of discovery. This thrill occasioned by a seeming discovery may be as stimulating, pleasurable, and satisfying to the immature pupil as true research work is to the mature chemist. The verification of chemical facts forms an

important part of high-school chemistry and builds a firm foundation for future work in chemistry.

The question that confronts us is, Does this method lead to reflective thinking, and to what we call scientific method? Our recent accepted writers on methods in the high school do not advocate using the laboratory for the purpose of having the pupils perform experiments to confirm what has already been taught in the textbook. These authors advocate its uses for solving problems and finding out things that are new to the pupils. They should use the laboratory just as the scientist does, for the definite purpose of discovering some fact or relation that they need in solving a problem. Disputes may be settled here and the more concrete and significant the problem the greater the value of the laboratory exercise. Thus the laboratory may become a court of appeal.

Professor Mann says, "Since the laboratory is the place to solve problems that cannot be solved without experiment, the most fruitful type of exercise is the one whose result is not known in advance." In contrast to this method, in a chemistry textbook just issued in 1925, one laboratory exercise is "to show that water forms when a candle burns," another is "to show that carbon dioxide forms when a candle burns." Both results are known in advance; they are indicated in the subject of the experiment. Many like examples might be given. Compare these now with the problem method suggested by Professor Mann from whom I again quote:

> Thus the theoretical-mechanical advantage of an inclined plane or a set of pulleys is known in advance but the actual efficiency of a given plane or pulley is not known, but depends on how the machines are handled. If the student is asked, What is the greatest efficiency of this inclined plane? Is it greater with a large load or with a small load? he will get far more real training from this work than he will if he is asked to verify the law of the inclined plane. In the former case he has a problem to solve, and the solution depends on what he is able to make the plane do; in the latter case he has to make his results tally with the theory.

Another problem that confronts the science teacher is how much mathematics to teach. The following quotation is from Professor A. A. Michelson, of the University of Chicago, one of the leading American physicists:

I would, therefore, propose for discussion the feasibility of a plan for the teaching of physics, which avoids as far as possible the use of mathematics of even the most elementary kind and which gives to the science of measurements only a secondary importance. It is of vastly greater value to know that all bodies attract each other than to know the law of inverse squares.

This statement of Professor Michelson might also apply to mathematics teaching in chemistry where we use decimals, percent, proportion, and equations. It has been the speaker's experience that much time must be spent in teaching arithmetic before the problems in chemistry can be solved. In teaching the subject of percentage composition, ask your pupils to find the percent of boys and girls in the class. If your experience is the same as the speaker's you will find few pupils who can solve this problem. You will also find very few pupils who can point off correctly the quotient in division of decimals. There is similar difficulty in the use of proportion in solving problems.

What shall we do with such laboratory experiments as "Finding the weight of a liter of oxygen," "The reacting or equivalent weight of a metal," "The atomic weight of copper," "The gram molecular weight of carbon dioxide," and "Percent of oxygen in air—valumetric," if we omit experiments that involve mathematical computations?

Many of the new methods suggested by modern writers have been successfully tried out in university high schools where only favorable conditions prevail, a select group of pupils and small classes. Now the question is, can we use these methods in the ordinary high schools where classes are large and pupils come from all sorts of homes.?

PARENT-TEACHER ASSOCIATION

Mrs. W. H. Sawyer, *Columbus,* Presiding

THE SUPERINTENDENT AND THE PARENT-TEACHER ASSOCIATION

F. M. Shelton
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Frequently the organization of a public-school system is likened to that of a business corporation. They both have their administrative officers and managers, and they have their board of directors elected by the stockholders, or persons who either have furnished or are furnishing the capital for operation. There is, however, this marked distinction; in any commercial or industrial corporation the stockholders are relatively few in number while in the schools they include everyone in the school district.

As a result a corporation can be and usually is very secretive about its business management, relations, returns, and future plans and prospects. It is the private business of the superintendent, directors, and in a limited way, the stockholders. They have no time for the consideration of the public as long as they can secure the employees they need and have a market for their product. They are entirey independent of the pubic. They even resent the filing of the few reports required by the government. Too many of them even go so far as to say "the public be damned."

There is one type of corporation that through legislative action has come under limited governmental control, namely, public-utility companies. They have resented this extension of governmental authority but because of the public services they render they have been forced to give some heed to the demands for fair dealing from the people they serve.

The organization of the public schools is such that not only are the people deeply interested in them, but they have a right to insist upon being given complete and detailed information regarding all phases of school work. It is because of this peculiar

relationship of superintendent, board, and public that I would advocate a Parent-Teacher Association in every district. Through the Parent-Teacher Association the superintendent of schools has an easy and natural approach to the public he serves.

In the past too many school superintendents have taken an attitude toward the general public similar to the close-mouthed industrial corporation manager. He has not taken the public into his confidence. If urged to explain policies and plans, he has tried to get by with telling only half the story or by giving out only the things that he feels most comfortable in having the people know. Such a policy is shortsighted. Sooner or later it will lead to dissatisfaction and distrust.

The members of the Parent-Teacher Associations are interested in the schools or they would not be members. They are parents or teachers. In any community they are the leaven to spread a wholesome school spirit and secure enlightened support for any progressive school policies. Such an organization gives the superintendent an opportunity to meet his people under circumstances where they will be interested, sympathetic, and ready for guidance.

Groups of twenty-five, fifty, or more members of a Parent-Teacher Association, living in a school district, coming in contact daily with neighbors and various social groups, can do more to propagate a wholesome school spirit and enlist support for any school measure than all other agencies combined. Superintendents who do not encourage the organization of Parent-Teacher Associations and give the work of these organizations some time and thought are overlooking one of their chief sources of strength.

Well-organized and active Parent-Teacher Associations in each school with a central council for the district can insure the success of bond issues, extra-tax levies, or other important measures. Newspaper space, pamphlets, and demonstrations are excellent sources of publicity but personal contact of the superintendent and his assistants with the parents in the association meeting is more effective. Personally I would feel lost if I did not know that I had behind me in every school district in the city an earnest group of men and women ready to work increasingly for the good of the schools. It is this kind of cooperation among school

officials, parents, and teachers that creates a wholesome school spirit in the community. The pupils feel it and it helps them maintain the right attitude toward their school work.

I have spoken largely of the superintendent's attitude toward the Parent-Teacher Association. Of course the Association has a responsibility to the superintendent. The parents and teachers organize for many reasons. But chief among them is their mutual interest in the boys and girls. This interest will cause them to support and not antagonize a sanely progressive school administration. I conceive the Parent-Teacher Association to be a constructive and not a destructive organization, as such it must build and not tear down, unless in rare cases it must tear down to make room for a new and larger building.

Each association should make sure that it has wise leadership in its officers and committee chairmen, people who have a vision, who can see through and around school problems. Such an association can do many things that the superintendent cannot; things that will be very beneficial to the schools and both directly and indirectly assist the superintendent. In the limited time at my disposal I cannot discuss these. I will only take time to speak of one. I select this one because it is so often neglected.

One of the best ways of insuring good schools is to make sure that the teachers are happy. And one of the best ways to make the teachers happy and contented is to make them feel at home in the district where they are working. Many of the teachers, probably most of them, come into the district as strangers. It is possible for them to live and work in the community and never have a part in its out-of-school life and social activity. It is true the Parent-Teacher Association meetings will be helpful, but they are still a part of the school.

Did your association ever make a business of welcoming the teachers and making them feel at home? Did you ever have a party, or reception, or dinner, not at the building, but in one of the homes in honor of the teachers? Do you make it a point to see that your teachers are included in the social affairs of the community? Do you entertain them in your homes? Do you include them occasionally on a pleasure drive in the country? Did you

ever invite your child's teacher to go with you to the theatre? If they were at home with their friends they would be participating in the social life about them. Every normal person including teachers should have a variety of social contacts. They will be refreshed and quickened for their daily work. They will be better teachers for not being ostracized. The members of the local Parent-Teacher Association are the logical ones to make the teachers feel at home and a part of the community and community life. Better schools will result and the superintendent will be happier. Let me urge upon the representatives of the associations here this morning to make the broadening of the social life and contacts of your teachers an important part of your program for next year. It will pay large dividends.

SOME PRINCIPLES OF SOCIAL ORGANIZATION APPLIED TO THE PARENT-TEACHER ASSOCIATION

Clayton C. Kohl
State Normal College, Bowling Green

For all practical purposes, social organization may be defined as the machinery by which society preserves itself as a group and carries out its purposes. In the mechanical world, organization comprehends bolts, screws, belts, bars, wheels, cogs; in the social world, organization comprehends laws, constitutions, committees, officers, courts, circulars. In both worlds, organization is the objective expression of a functioning idea or ideal.

In the field of mechanics organization is guided by the scientific principles of physics; in the social field, it ought to be guided by the principles of social science. Human social endeavor is so complex and so difficult that the social sciences have not attained a guiding power in any way comparable to that of the natural sciences. Human societies have unconsciously or semiconsciously developed their organizations along with their growth. All sorts of incongruities and blunders have resulted. Even in the state, perhaps the most perfect social organization, this is true. No

thoughtful person will speak cynically regarding these blunders, since the principles of social behavior have been so slow in coming and so incomplete upon arrival. Nevertheless, there are at least certain general principles of social organization so well known today that no large group or society can afford to forego their study. The Parent-Teacher Association is assuming such a large position today in our country and aiming at such vital goals that it cannot afford to neglect any guidance that the social sciences may have to offer.

One very simple and common-sense principle that a student of sociology will quickly learn is that the social organization in any given case must be intimately adapted to the purpose or purposes that it was meant to realize. The application of this principle to specific groups leads to enlightening thought. Group purposes may range from certain simple physical activities to the highest sentiments or even to a very complex type of culture. The organization varies with the nature of the purpose, and the purposes of many associations require machinery for their realization which does not exist and which cannot come into being for ages. This principle may be applied to the Parent-Teacher Association.

Some of the aims of the Association, as taken from publications of the National Congress of Parents and Teachers are: education for parenthood, together with facilities for such education; the improvement of child health, with particular emphasis upon the pre-school child; trained teachers for every public school, with increased facilities for securing this; the better cooperation of home and school in every phase of education; better films; better rural-life conditions; better training for citizenship; humane education; kindergarten extension; guarding monogamous marriage; removal of illiteracy; extension of art and music instruction; safety education; better reading for children; better recreational facilities; thrift education; sex education; encouragement of improved training in home economics; better school buildings and grounds, better and more artistically equipped. These aims are supposed to furnish programs of service for state, county, and local branches of the Association. No local branch is expected

to attempt all these aims or even any considerable number of them; but the national organization plainly presumes to be able to render help upon any one of the fields of service.

Every thoughtful person must sympathize deeply with each of these aims, but his sympathy cannot blind him to the huge task of organization involved in every one of them. Some of the purposes require the change of public opinion throughout the nation upon long-established customs; others require elaborate legislative programs; still others demand whole educational systems in specific phases of training. The National Congress of Parents and Teachers has not even the shadow of an organization for the realization of most of the goals it sets for itself and its branches. As quickly as one attempts to think out the purposes in terms of the means necessary to carry them out, he at once realizes that many of the goals are hopelessly vague and indefinite. No other national organization in our country, except the national government itself, assumes such ambitious objectives as does the National Congress of Parents and Teachers. A fuller meaning of this criticism will appear later.

A second principle of social organization is that such organization must be adapted to the people who have to administer it and who are to be influenced by it. If a number of physicians organize for the control of cancer, the means they will use will be quite different from those they would use were they to include in their organization the general public as well. It is one thing for a number of expert psychologists to organize for the study of the child mind; it is quite a different thing for both psychologists and parents to organize for the same purpose. The association we are considering includes parents and teachers, both classes representing large numbers of people of all grades of capacities and interests. This fact conditions every purpose as well as the means for realizing it. Recognition of this will change all our thinking with reference to ambitious aims and details of machinery for carrying them out. Ideals which are fairly clear to leaders may become hopelessly confused when carried to large numbers of people. Our political democratic organization illustrates this at every election time. In Parent-Teacher-Association programs of

work, this same principle is shown in sex education for parenthood, health education, child psychology, and most of the other fields of endeavor set for attainment. The greater part of parent-teacher work is fundamentally educational and directly primarily toward parents who are actively engaged in industry and the professions. Neither the content nor the method of this type of education has been worked out in any practical way as yet.

Perhaps in no other immediate way can the Parent-Teacher Association work become more efficient than through the vital organization of a few worthy and attainable goals. A few examples may be cited. If a simple and comparatively inexpensive text on parenthood could be prepared by the National Congress and sold to local associations for actual study by both parents and teachers, the local organization could then work out a definite way of providing for this study. A few parents and teachers could easily be secured who would take the course. They could furnish their own leaders for the most part. If the text were a good one, the course would grow in favor until it would reach most of the mothers in a school and some of the fathers. The same might be applied to child health and child psychology. Monthly programs would soon give way to weekly meetings under the enthusiasm that would be bound to develop. Even in the case of the monthly problems, were they carefully prepared and followed by proper publicity genuine educational results would follow. The program suggestions that local associations now get are general and vague and the proper material for their presentation is not provided. The life of the whole parent-teacher movement lies in the local association and to make this a real agency for good requires definite planning and hard work. Both parents and teachers will respond if something worthy is well done. Even the social evening must be carefully planned for educational purposes. Definite and attainable activities organized to meet the requirements of those concerned is the crying need of our work. Special lectures, entertainments, references to books written for experts, passing resolutions on marriage and divorce and welfare movements, and many other similar activities will never get the parent-teacher ideals far. It is blue-

prints of actually constructive and vitally needed work that the Parent-Teacher Association demands today.

A third principle of social organization, and one which has great meaning for the Association, is that individual social organizations must adapt themselves to other social organizations working in the same field, especially those which are pursuing like purposes. There are in this country now a large number of associations definitely organized and doing specific work in most of the fields that the Parent-Teacher Association has entered. The American Child Health Association, the American Country Life Association, the American Home Economic Association, Community Service, National Child Welfare Association, the American Social Hygiene Association, Playground and Recreation Association of America, National Education Association, National Board of Review for Motion Pictures, National Security Council, and many others. The National Bureau of Education and such Foundations as the Russell Sage and Carnegie might be placed in the same class. Besides these are numerous state and city associations working in the same fields of endeavor. Many state and local boards of health have developed admirable organizations. Nearly all of these have taken far less ambitious projects than has the Parent-Teacher Association, and they have far more definitely organized their purposes and adapted them to the people whom they aim to serve.

The National Security Council has issued an admirable manual on Safety Education costing only thirty cents. The Cincinnati Hygiene Society has organized what appears to be an excellent program on "Sex and Character Education." The Playground and Recreation Association of America has published excellent, constructive programs for play provision. The publications of the National Bureau of Education are almost unexcelled in the worth of the material they contain. Many state and local boards of health are issuing valuable pamphlets and documents. The Parent-Teacher Association can do no better in many of its fields of endeavor than to cooperate with these associations and bring their work to those who so vitally need it. Mrs. Florence V. Watkins, in the Executive Offices of the National Congress of Parents and

Teachers at Washington, is attempting to do this very thing in her notes in the *Child Welfare Magazine* each month; and these notes are the most valuable material that is being published by the Congress. The only trouble is that there exists no organized means for getting the material and making it function in local associations. The same might be said of much other material. Often schools and communities have health problems that the commissioner of health in the communities might solve with the cooperation of the Parent-Teacher Association, and yet he is not used nor is the free literature he possesses even distributed. There is an abundance of personal service and material lying about on Parent-Teacher Associations which they do not utilize because they do not realize how to adapt their organization to others about them. Many of them do not even utilize the schools of which they are a part. The superintendent of schools ought to be the greatest asset of every local organization; the community physician ought to be a tremendous force in it; and every teacher ought to be a valuable service to it. All the clubs and societies in a community might be brought into use. Again, all of this is a part of planning, of organization.

The by-laws of the National Congress of Parents and Teachers give as one of the two major objects of the whole organization:

> To bring into closer relation the home and the school, that parents and teachers may cooperate intelligently in the training of the child; to develop between educators and the general public such united effort as will secure for every child the highest advantages in physical, mental, moral, and spiritual education.

If this general goal can be kept uppermost, with definite and workable specific objectives organized and carried to fruition, such objectives adapted to the people who need them most, and all agencies possible allied to their realization—then the Parent-Teacher Association will have an ideal all its own and one which cannot be surpassed in its worthiness. It is a difficult task in human social engineering, but no other task is more inspiring.

THE JUNIOR HIGH SCHOOL AND THE PART-TIME SCHOOL—NO CONFLICT

R. L. Cooley
Director of Continuation School, Milwaukee

I am particularly pleased to be called upon to address the Parent-Teacher Section of the Ohio State Teachers Conference. I have felt at times that the necessity for the organization and support of part-time schools has not been fully understood. Their desirability, and even feasibility, have properly been questioned.

The part-time school means short-time contact, and short-time contact, often so little as one-half day a week, means a school so different in its organization, administration, and objectives as hardly to be recognizable as a school by those who demand to see what they are accustomed to because these are "schools." The part-time school must be developed according to its own genius. Those organizing and administering the part-time school must be free to go where the facts lead. If these schools remain mere miniatures of the schools run on full time, when they operate but one-half day a week, they will fail.

Compulsory part-time schools, commonly known as the continuation schools, are in their infancy in this country, and many people are skeptical as to their value. This skepticism cannot survive a study of the facts. No one now questions either the value or the obligation, of the public to support grammar schools which provide education for the young people up to approximately fourteen years. It is commonly accepted that communities should provide free public high schools going four years beyond the grades. Most states are liberally supporting state universities to provide education beyond the high school.

There is, however, a group of young people not in the elementary schools, not in the high schools, not in the universities, and not yet twenty years of age, who are out in employment, whose educational needs have always been neglected. This group is many times greater in number than those attending the high schools or the universities. They constitute those who were obliged early to go into employment, and who, though still in their formative

years, are not connected with any educational institution. No effort has been made comprehensively and adequately to offer educational opportunity as a public responsibility to this great stratum of our young people. There were many obstacles in the way of offering educational facilities to this large group.

In the first place, the need was unnoticed. Again, the communities already felt the tax burden imposed upon them in providing for the elementary and high schools. When the problem was called to their attention, local authorities frequently have not felt that the communities would provide as they should for this additional group without subtracting it from the support of the accepted elementary and high schools. Then, too, these young people are obliged to work for a living. Night school upon a compulsory basis is unthinkable in this age. To provide day schools would mean that the workers must be away from their places of employment during working hours. The part-time school might lead to diminished pay, and interference with the employer's business program, because in many instances there are scores of young people in one place of employment. It frequently would be objected to by both parents and the young man or woman. Consequently, offhand, many people were and are inclined to dismiss the idea of part-time compulsory education for young people in employment even under eighteen years of age as expensive, impractical, inadvisable, and largely futile.

But beginning in 1911, in our country there were people with vision who believed that the whole gamut of education pays, that youth must be dedicated to education primarily, and that no large section of the youth of our land must be permitted to get out from under the formative influence of organized education at least until eighteen years of age, even though that education might be offered and administered only upon a part-time basis.

Laws were passed successively by various states, differing somewhat in scope and character, for the part-time schools' administration, and it can now be said that the part-time schools of the country are an accepted institution, that they have proved their worth, and that, where they are provided, we are at last attacking the final dark continent, the great neglected field of education.

In almost any large city there are three times as many young people out in employment of approximately the same age as are in attendance at high school. Many young people finish the grades and undertake high school, but leave by the horizontal method of failure and abandonment rather than the vertical method of graduation. These young people, life for life, are just as valuable to themselves and others as are the more fortunate people who go through high school and university. They exist in far greater numbers, and the social and economic hazard of their neglect is greater even than the neglect would be of the more favored group who go through the high schools and colleges of our country.

In the communities where part-time schools have been organized, calculated to permit at least five days of employment coupled with one day of organized guidance, counsel, and definite study, it has been found that the three or four years of initial contact of the young people with trade, commerce, and industry can be made an educational process, which it is hoped, may be made in many respects quite comparable to a high-school course for these young people, and can save this early experience from being mere exploitation, whether that exploitation be that of the parent exploiting the children, employers exploiting them, or the exploitation of the young people themselves by themselves because through inexperience they do not see the relation of early preparation to later life.

The danger to this whole movement lies in the fact that our school authorities often do not have the courage to attack the problem adequately and comprehensively. They see it as small and make piffling provision instead of directing public sentiment to a great piece of work and a great cause. They feel the burden of the support of the grade and high schools as already too great, and reluctantly provide for this modern Cinderella of education which annoys them by insisting on a place in the household. It takes vision and zeal and courage to go before the modern community and demand the proper educational facilities to do justice to this large group that is early toiling and moiling, assuming adult responsibilities on the one hand, or gay and thoughtless of the future upon the other; a group so large that its social and eco-

nomic significance dare not be ignored by thoughtful people who see wherein our future hope and danger lie.

Wisconsin has taken hold of the problem vigorously. Fifty-two cities in the state maintain separate schools for the handling of this problem. In the city of Milwaukee the group of young people in part-time attendance under eighteen years of age, coming from the lowest economic stratum in the community, earn in wages enough each week to pay all of the teachers of all of the schools, elementary and high, for all of the children in the city. They carry this money home to supplement the lowest family budgets in the city, it is true, instead of paying it in to the public treasury for the payment of these teachers. Their total contribution to the family incomes in the city, however, considering that they are of an age that entitles them to sit five days a week in the public school, in all justice entitles them to part-time school attendance, if part-time school attendance can be made effective. It has been proved beyond doubt that part-time school attendance can be made effective, that the work of five days can be made of value to the school of one day, and the school of one day can be made of value to the work of five days.

The movement has come to stay. The character of criticism which first opposed and would repeal the law, has now changed to a public demand that the schools be adequately provided for and be made increasingly effective. It is recognized that the early years of preparation are short and yet these years determine the social and economic level upon which the long adult period is to be spent. If people cannot serve, they cannot earn. If they cannot earn, they cannot buy. If they cannot buy, the total business potentiality is diminished. There is no source of greater wealth or greater business volume than the development of our people. In this development our schools, whether part-time or full-time, can be made to play a major part. There is the same relation between education and business as between rainfall and irrigation, fertilization and crop, and this relation holds just as true of the large adolescent group in employment at that early age as of those perhaps more ideally situated in the full-time school. There is a very large group, however, who are better off on a program of

part work and part school than they ever would be upon a program of school alone or work alone. For those who have studied the problem it is increasingly clear that the part-time schools have a tremendously important and strategic place in our scheme of education.

The first great obligation of those responsible for the administration of the part-time school for working boys and girls is to "fine comb" the community to see which boys and girls have left the high school, and to make every effort for their proper return to complete their course. In any zeal that I may have for part-time education, I trust there may never appear a trace of opposition to the full-time school, whether it be the junior or the senior high school. The high-school education is what I would wish for my own children, and high-school education is what I wish for all the boys and girls where a study of the situation would show that it is possible for them to have it, and that they will profit by it. I see no room for jealousy or antagonism between these two important phases of educational work.

In our work in Wisconsin we have provided, out of state funds, scholarships amounting to $15 per month, for the boys and girls we may discover, whose financial situation has forced them out of school, provided we can assure ourselves that they will probably profit by further high-school work.

We have found that in spending money upon this group of young people, providing not only for those who must come compulsorily, but also for that adult education that might be sought on a voluntary basis, we are building up a great good will for education that means these young people, so soon to become voters, will always stand behind the demand for funds for education. They pass over the line of their majority, having recently benefited by the service the school offers, and they vote for more bonds, more money, better teachers' salary schedules, and all of these things which our schools so greatly need.

Since 1912 we have erected a building at a cost of three and one quarter million dollars. We have developed a full-time corps of one hundred and eighty teachers. We have in our school very nearly 12,000 young people, most of them on a part-time basis,

and at the same time we have given to our elementary- and high-school teachers one of the best salary schedules in the United States. I am citing this not with the idea of convincing you that the part-time school influence has been the sole factor in accomplishing this for education in general, but merely to claim a minor part in this accomplishment, and to show you that we have been a help rather than a hindrance in the situation.

I trust that you may all see your way clear to a loyal support of the movement in your state, for I am confident the adequate and comprehensive provision for the part-time schools will be good for all education and will bring with it blessings to your state from this long-delayed act of justice to a neglected group among the youth of our land.

PHYSICAL EDUCATION

MEN AND WOMEN

L. W. ST. JOHN, *Ohio State University,* Presiding

A SURVEY OF ATHLETIC AND PHYSICAL EDUCATION CONDITIONS IN OUR HIGH SCHOOLS

KATHARINE F. HERSEY
Ohio State University

In order to determine the status of physical education in the State of Ohio, we have for two years now sent questionnaires to all the high schools in the cities of a population of over two thousand. The results of these questionnaires have been tabulated and the determined data should be of interest to all physical educators of this state. We regret that we have so few replies from the high schools, for no very accurate data can be secured from a limited number of cases. Out of two hundred questionnaires sent out, we have heard from ninety-six, and of course we realize that these results may not typify the conditions of physical education in Ohio as a whole, yet they probably do serve as an indication of the situation in some of the principal cities of this state.

The information which will be of most interest to you probably concerns the question of medical examinations, the equipment for work, the method of instruction, and a slight summary of the interscholastic and intramural situation.

With the exception of a very few schools, work in physical education is required. At least the state law providing this requirement has had some effect, but unfortunately the law has no provisions for the control or the direction of work in this field. Perhaps the time will come when the adoption of a compulsory act will be accompanied with definite provisions for the carrying out of the law. Until that time comes, it becomes the task and privilege of all those vitally interested in physical education to try to raise the standards, not only in their particular schools or communities, but throughout the state as a whole. Such meetings

as these and smaller sectional meetings in various parts of the state should serve as a means for bettering conditions, for it is chiefly through exchange of ideas that progress comes about.

In only 33 percent of the schools is physical education included in the curriculum for four years. Many high schools require the work only of Freshmen and Sophomores and a few take the work just one year. During this early adolescent period of rapid growth, it is most urgent that a chance for broad psychomotor development be provided. It is this, rather than the college period, which is a crucial one for the establishment of physical strength and vigor. Therefore, it is to be hoped that in the near future all high schools will include physical education in the program of each boy and girl throughout the entire high-school term.

Now not only should the work be required for four years but it should be classified and graded according to the needs and capacities and physical condition of the students. Toward this end, it is most important that medical examinations be given to every student. The most startling conditions seem to exist throughout the state, for only 24 percent of all the high schools replying to the questionnaire made any provision whatsoever for medical supervision of the pupils. A thorough medical examination is ideal, but if funds cannot be provided for this, it is at least most urgent that high schools recognize the minimum medical standards. Examination of the heart, of the lungs, and of the throat for tonsils and enlarged thyroids should be given each pupil. Serious handicaps which may exist throughout life often result from a lack of medical supervision. A diseased heart which would, under care, recover its normal function, may, if submitted to athletic strain, result in chronic heart trouble. You all realize the strain that is undergone in athletic competition and it is interesting to note that 16 percent of the schools give no medical examinations even to participants in interscholastic competition. Infectious diseases which are so prevalent during the pre-adolescent period may result in serious after-effects in this high-school period and medical supervision should safeguard against this. Results of the questionnaires would indicate that there are undoubtedly many pupils in our high schools engaged in interscholastic or intramural sports

who are injuring rather than improving their health, because of some physical defect which no one knows exists.

In some high schools, medical examination is given only to those students who are playing on interscholastic teams. Naturally these selected few should receive medical attention, but what is necessary for them should be necessary for all. The real problem is not to select a physically fit team to represent the school, but rather to provide proper medical attention for every pupil enrolled in required classes of physical education.

Of course the attitude that various high schools hold concerning physical-education problems depends somewhat on the person who organized the work. It is interesting to note that of all the high schools heard from, only fifty-five percent have full-time instructors in physical education. Many of the smaller high schools will undoubtedly have such instructors in time, and in the meantime the work may be carried on most successfully through the cooperation of the teachers of academic subjects in the school. But in a high school of four hundred students, it would be almost impossible for the work to be carried on as it should be, without a full-time instructor. Twelve schools of an enrollment of over four hundred pupils reported as having no special teacher for this subject.

Many schools indicated that they have part-time coaches instead of instructors. The coaches, who are probably excellently fitted to develop school teams in basket ball, baseball, track, and soccer for the boys, or in basket ball and baseball for the girls, are concentrating their efforts on a few. The school is anxious for a championship team, and the coach has the use of the gymnasium on certain afternoons for the purpose of training these selected boys or girls. By such a system those who are not as skilled or are not endowed with as much athletic ability as others, are missing that which a few enjoy.

A large percent of all these coaches are not trained as physical educators. The demand for teachers of this subject is right now so great that it is necessary that untrained teachers fill the positions. Many of them are doing fine work, but they should recognize the fact that further study, either through summer school

or extension work, would supplement their inadequate training and aid them in carrying on their work in a more intelligent manner. An understanding of the instinctive tendencies and a knowledge of the physical characteristics of high-school students are essential for really successful teaching. With this as a background, the adaptation of activities for individual needs will be more successfully determined and the objectives of the work will become more definite.

As for interscholastics, the majority of schools are engaged in this kind of competition. Concerning the girls we find that out of 96 schools, 59 play interscholastic basket ball; 2 play hockey; 3, baseball; 16, track; and 7, tennis. Five have swimming meets with other schools. Practically all the boys' schools participate in interscholastic games. All but three compete in football and basket ball. Track is the next popular, with baseball running fourth. Among the girls, 17 schools have men coaches while 45 have women coaches. Twelve of 62 schools use boys' rules, or modified rules, and 42 use girls' rules in basket ball. For many reasons we would recommend that girls have women instructors in their sports, and that as a safeguard against overwork or strain they use only girls' rules.

It seems from the questionnaires that in those schools where trained teachers are carrying on the work the system of intramural athletics is emphasized as much as interscholastic competition. All high schools should recognize the need for providing the opportunity for the mass of students to participate in organized competitive sports. Fifty percent of the schools have over 20 percent of their student body taking part in intramural sports. It is to be hoped that this percent will increase, for intra-mural athletics offer for the mass of students all those social and competitive values which interscholastics provide for the few.

For the development of a complete and successful program of physical education, adequate equipment is one of the first essentials. Seventy-one of the schools have athletic fields. Seventeen schools have two gymnasiums, one for the boys and one for the girls, while seventy-five have only one gymnasium which is shared by both girls and boys.

Naturally, where one gymnasium must be shared both boys and girls suffer. Certain afternoons must be given over to the girls when the boys really need it themselves for practice periods. Intramural systems for the girls and boys can never be very extensive in the larger high schools until adequate play space is provided. Out of all the schools heard from only nine have swimming pools. Since swimming is one of the best activities for all-round development each instructor should make every effort to add this to the equipment of his high school.

With an adequate program of physical education, planned and carried on by trained people who will insist on medical examinations, will recognize the place of a wide intramural system, and will have energy left to struggle for equipment, we can hope for improved conditions in the State of Ohio. May our next set of questionnaires raise the percent. We wish to thank all of you who have sent in questionnaires and helped make this survey possible.

HEALTH PROBLEMS AMONG COLLEGE GIRLS

Gertrude Moulton
Oberlin College, Oberlin

The problems of health among our college girls are often mental problems. If we could get our girls to have the correct attitude of mind toward health we would have gone a long way toward solving our problems. When we can give them a desire for health and a conviction that it can be attained by individual efforts, we have helped them more than we could with a hundred precepts. Some of the conditions which have confronted us this year have related to contagious disease. The first was smallpox. A survey of the field showed that about 20 percent never had been vaccinated, 35 percent had not been for years, and 8 percent were opposed to vaccination.

Another group of problems has to do with the low level of efficiency at which our students are content to work. If one is as well as her neighbors she is often content. She does not try to reach a high standard of health.

One objective stated by the Women's Foundation for Health is "to establish the conviction that health is generally obtainable through individual effort and responsibility." For the realization of this objective they propose a program which promotes the positive viewpoint toward health education, and the individual's assumption of her own responsibility. They also attempt to secure periodic health examinations for the sake of the inventory of individual needs, and give advice concerning daily health habits, exercise, and recreation. They later check improvement and give further advice. The program also promotes education in regard to food, inheritance, and adaptation of recreation to individual needs. They propose to carry on their campaign for better air, for better food, for better teeth, for better posture, and for better feet.

Physical education must include more than exercise, more than hygiene, if it is to fill its place. We must look to the physical-education group for help and guidance in all the things that mean more efficient and better living, plus health, "what men live by."

I know of no group, who could take over the teaching of sex education and the direction of life along sane emotional lines better than the physical-education group. They are best fitted to further this work both because of their previous training and because of the intimate contacts they can make with the students. It would take much earnest thought and study. We have not yet reached any conclusion as to a sane and helpful way to teach the meaning of these natural instincts, because there has not been such earnest study, but the need of education along this line is admitted.

If our girls are to be healthy and wholesome, their relations to others—boys and girls—must be healthy and wholesome. They should learn that any relationship may lead either to an enlarging experience or to a narrowing one. The one means better health; the other, expending energy without return, may result in invalidism in extreme cases. I do not refer now to conjugal relations. I believe, however, that every girl who has instincts of affection or who comes in contact with those who have, should realize that her instincts should be controlled by intelligent choice, and directed

along constructive paths. Caresses of all kinds are based on sex instinct. They should, I think, never be used except as expression of deep affection, a culmination of controlled discriminative feeling, which holds both persons to their finest level.

This is one of our problems which we are a long way from solving. The emotional friendships of girls is related to health, and we must help them to recognize this. Although we cannot show exactly where wrong emotional life leads, we can show that controlled emotional life leads to greater vigor and enthusiasm. The test of a relationship is in the degree to which it brings out the best that is in the individual. The friendship which is exclusive, which spends itself upon its objects, with itself as a center, jealous, over-sensitive, narrow, becomes a pathological condition. It is related to hysteria and eventually may develop into mental derangement if it is not controlled.

I would not be understood as saying that this training which looks toward stable mental equilibrium should be taught to young people as sex education. I fear that because of misinterpretations, the word sex should not be introduced until the viewpoint is assured. Nor am I at all sure it could be taught as a separate subject, but teachers should be able to understand and guide the time-consuming, energy-expending, selfish, exclusive friendships they are developing. To that end they should read and study, think and prepare, remembering that fools often rush in where angels fear to tread. In connection with physiology, anatomy, biology; on hikes, in games, and in camp life, without overemphasis, the viewpoint can be given. If sex permeates and influences life, sex education cannot be given in a course or a few lectures but must recur in new connections at frequent intervals just as sportsmanship, attitude, and other phases of health have to be taught through many agencies and from many angles. But the teacher who comes in close contact with the girl in her games and sports has the greatest opportunity to help a girl develop mental health, and emotional stability, to prevent the type of friendships sometimes called "crushes," to help the girl divert her instincts into constructive paths. As is the case in all other things in life, the same circumstances which give oppor-

tunity for development in one direction also give opportunity for development in the other. The friendship of girls, uncontrolled, may develop jealousy, sensitiveness, hysteria; controlled, it leads to more stable mental health.

THE STATUS OF STATE HIGH-SCHOOL ATHLETIC ASSOCIATIONS WITH SPECIAL REFERENCE TO OHIO

H. L. McCullough
Ohio State University

The majority of the state high-school athletic associations are independent organizations. A few are responsible to other units such as State Departments of Education, State Universities, or State Educational Associations. The governing body in the various associations is known as the Board of Control, Federated Council, Executive Committee, State or Central Committee. This body consists of from three to five members who are elected by the membership or appointed by the controlling unit for a term ranging from one year to an indefinite appointment.

Thirteen of the forty associations make definite provision for the supervision of districts. District boards have some executive power, but the authority to interpret rules, decide protests, suspend and expel, is usually vested in the state body. There is a tendency to centralize this authority in the President of the Board, the Chairman of the Committee, or the Executive Manager of the state.

A relatively small portion of the associations make any provision with respect to postseason games, preseason practice, and girls' participation in interscholastic competition. A study of current literature on this subject reveals a changing attitude in the minds of not a few educators toward a further extension of the athletic season and girls' participation in basket ball under boys' rules.

In drafting a constitution for a state such as Ohio, one would naturally compare the constitutions of states similar in size and geographical environment. In this group of states we would include Illinois, Indiana, Iowa, Minnesota, and Wisconsin.

In drafting eligibility rules we are guided by three criteria: the frequency with which these rules appear in the constitutions; the principle that "places on athletic teams should be made available to as many different students as possible;" rules should be written so that misinterpretation is reasonably impossible.

If one were permitted to make recommendations the following major ones are in order: (1) limit the membership to public junior and senior high schools; (2) centralize the executive power in the hands of the Athletic Commissioner; (3) elect the members of the Board of Control by a mail ballot sent out by the Commissioner; (4) let the membership propose rules at the annual meeting; if passed by a majority at this meeting, they should be ratified by a majority mail vote of all members; (5) prohibit postseason games and preseason practice; (6) provide that all girls' basket-ball games be played strictly under girls' rules; (7) provide that the coach be a regularly certified teacher; (8) pass a residence and migration rule; (9) and make no exceptions to any rule.

The recent injunction case in which the Ohio Association was the defendant is not a new thing. The Minnesota and Wisconsin Associations had similar proceedings brought against them. After analyzing the court proceedings and the opinion given us by Harry R. Trusler, Dean of the College of Law, University of Florida, we must conclude that athletic associations will be restrained by court order as long as there are judges willing to grant temporary injunctions.

We think it would be unwise for this association to attempt a reorganization at this time. Let a committee be appointed to study all available literature on the subject of state athletic associations. Let this committee submit a constitution and by-laws to the membership and secure the reaction of each member on forms provided for that purpose. Then let them submit the revised document at least thirty days before the annual meeting in 1926. If this procedure is followed we ought to be able to adopt a constitution satisfactory to the major portion of the members.

Finally, we may make our eligibility rules as "air tight" and "foolproof" as possible, but unless the administrator thinks of

his athletics in terms of educational procedure rather than in terms of gate receipts, we shall continue to have violations.

ATHLETIC PROBLEMS AS SEEN BY A MEMBER OF THE STATE BOARD OF CONTROL

H. L. Rawdon
Superintendent of Schools, Oberlin

It was nineteen years ago this spring that the first steps were taken towards the organization of the Ohio High-School Athletic Association. Prior to this time the regulations under which high-school teams competed were those adopted by boards of education and other local organizations. This meant a lack of uniformity of standards and ideals, and in turn a lack of understanding among the competing schools. Serious problems were ever present, and such grave criticisms were made against the conduct of high-school athletics that some took the ground that interscholastic high-school athletics should be abolished. Others held that through proper control and regulation the most objectionable features of high-school athletics could be eliminated, and that they could be so conducted that they would contribute much that could not otherwise well be secured to the physical, mental, and moral development of our high-school boys and girls.

Many of you will recall the times when a boy to be eligible for high-school athletics need be enrolled only in music or in art; when a boy might vote for president one year and be a star on his high-school team the next; when amateurs and professionals played side by side; when boys entered school in November to play in the Thanksgiving Day game; when officials were assaulted and called vile names; when visiting teams hurriedly left town to escape violence; when the spirit of brute force often prevailed, and the spirit of courtesy and sportsmanship seemed utterly lacking.

These were conditions twenty years ago. As we turn to view the present situation, what shall we say? Have we made any progress? Has the Ohio High-School Athletic Association meant nothing? When we are informed of the facts concerning the

Fremont-Oberlin football game at Fremont last fall; of the basket-ball game at Warren that broke up in a row; of the recent assault on an official in a high-school game at Lima, I confess that even those of us who have been in closest touch with the development of high-school athletics sometimes become discouraged. I am in no way attempting to place the blame and responsibility. I merely point out the fact that these disgraceful scenes occurred.

The State Association has doubtless not done all that in the beginning it hoped to do. It has failed in many ways. It has made mistakes. But it has been the one state organization that has attempted to exert the right influence in a positive way upon high-school athletics. Today its membership is the largest it has ever been; it now includes more than three-fourths of all the schools in the state. Its influence and authority are increasing every year. It has done much in establishing beyond question of doubt that it is desirable to have uniform standards of eligibility; that professionalism has no place in high-school athletics; that honest and competent officials are worth while at almost any cost; and that athletics must be considered a part of the school program, and that as such must be carefully supervised and regulated by the school authorities if they are to contribute to the educational development of our boys and girls.

Along with this rapid growth and development of the State Association, and with the ever increasing interest and competition in athletics, there have naturally arisen new problems which have not as yet found solution. A generation ago, high-school interscholastic athletics were of such minor importance that the question of their proper relationship to the rest of the school program was hardly raised. Today there are those who believe that too much importance is attached to athletics, and that they have been allowed to transgress beyond their own sphere. It raises such questions as: Would we be better off if we could absolutely eliminate the interscholastic athletic program from our schools? Or shall we strive to develop our athletic program to such an extent that our financial returns may be materially increased; that every school of considerable size may have its own stadium; that greater incentives may be given every high-school boy to

aspire to membership on state and national championship teams? Is there the possibility of high-school athletics becoming too highly developed? May high-school athletics become a business rather than a means of education and recreation? Could there be any possible danger if high-school athletics should continue to develop as rapidly in the next generation as they have in the past? Is it, or is it not, desirable for high-school teams to travel across the continent to participate in intersectional contests? It is my judgment that we have reached the point where we must decide these questions, not by selfish desires and ambitions, but by the most thorough investigations and scientific research. We must adopt a policy which shall be based upon the experience of the past and which looks beyond the present far into the future. I submit that these questions must necessarily be viewed from the standpoint of health, physical development, and education, and not from financial returns, championships, and the possibilities of putting cities and villages athletically on the map.

At the present time a so-called national high-school basket-ball tournament is going on at Chicago. It is my opinion that the desirability of high-school basket-ball tournaments, even when carefully supervised and regulated, is a debatable question. When boys of high-school age are permitted to play four or five games within a period of thirty-six hours, its desirability is extremely doubtful. When those in authority permit high-school boys, after playing a full season's schedule, and after participating in a regional tournament, a district tournament, and finally a state tournament, to go and compete in a national tournament where the winner is required to play not less than five or six games, it is, in my opinion, absolutely indefensible from the standpoint of health and physical development. It is a responsibility which I should be very unwilling to assume. If, however, scientific research proves that such tournaments are of much value and of little harm, then they might well be incorporated into our future athletic policy. Why do we have these national tournaments? Have they been demanded by the school men and educators of the country? Do those in authority and those responsible for this tournament feel that they are doing an unselfish missionary service in the field of physical education? It seems to me there is

real danger in subjecting boys to such great physical strain as is necessarily involved; there is also danger of placing emphasis upon athletics out of all proportion to other phases of education, and giving boys a wrong viewpoint.

As most of you know, the Board of Control of the State Athletic Association had last fall a very interesting and unusual experience with what was known as the Meese case. Since this case was rather typical of so many problems that have come before the Board, I wish to remind you of the main points involved. Two rules of the Association had a bearing on this case. One, known as the eight-semester rule, reads as follows: "A pupil shall be ineligible to play on any high-school team or to contest in any event representing this Association after he has been in attendance at a secondary school, or schools, for eight semesters." To this rule there is no exception. The other rule, known as the immediately preceding semester rule, is: "A pupil to be eligible during any semester must have passed during the immediately preceding semester in studies requiring at least fifteen prepared recitations per week or must have made up any deficiencies in that amount of work in accordance with the established custom of the school." To this rule is the following exception: "If any pupil has become ineligible under this rule from a cause beyond his control, the State Board may declare him eligible if the rule is working injustice in his case."

One Frank Meese, of Scott High School, Toledo, about February 1, 1924, finished his seventh semester in high school. If he should remain in school the second semester, he would be ineligible under the eight-semester rule for football the following fall. If he should drop out of school for one semester he would be ineligible under the preceding-semester rule, unless he could show that the rule was working injustice in his case, and got the State Board to declare him eligible. He entered Scott High School at the beginning of the second semester, but withdrew before he had gone long enough to have the semester counted against him. In June, 1924, he petitioned the Board to declare him eligible under the exception to the immediately preceding semester rule. On account of three members of the Board being

out of the State practically all summer, it was impossible to get a meeting of the Board until early in September. Then at three successive meetings in as many weeks this case was carefully considered. The father of this boy, the principal, and the faculty manager of Scott High School came to Columbus and appeared before the Board in the boy's behalf. It was pointed out to the Board that this boy about the beginning of the second semester, 1924, developed incipient tuberculosis; that he had spinal trouble due to an injury received earlier in the season; that he had eye trouble and was advised not to do school work; that he was needed at home because of the serious illness of his mother; and that a great injustice would be done this boy if the Board should refuse to allow him to play. Upon further investigation, the Board found evidence contradicting many statements in the petition, and finally decided not to declare the boy eligible. The father then sought, and was granted, a temporary injunction restraining the Ohio High-School Athletic Association, the Board of Education of Toledo, the principal and faculty manager of Scott High School from keeping this boy off the team and preventing his taking part in interscholastic contests. Nearly three days were consumed in trying this case in the common-pleas court, and part of another day in the court of appeals. The decisions in both courts upheld the Board of Control in every way.

I mention these details chiefly to point out what is so often the attitude not alone of pupils, but of parents and school authorities who are responsible for the conduct of high-school athletics. It is the attitude, it seems to me, of attaching undue importance to winning games; of developing highly specialized teams. We hear much about the injustice done in declaring a boy ineligible, and usually the greater the player, the greater the injustice. There are those who seem to me selfishly sympathetic, and who seem unmindful of the fact that every time a star athlete is declared ineligible, a vacancy is created on the team, and an opportunity given to some other boy just as worthy and oftentimes more deserving.

It is not my purpose to discuss the many questions of detail that come before the Board. One of the larger problems, as I

see it, has been to secure more adequate supervision. So far as local school units are concerned, much progress has been made. Principals feel a greater responsibility than they did twenty years ago. Faculty managers have been appointed who devote a part of their regular time to this work. Coaches are of a better type, and have a broader conception of the true value of athletics. Boards of education no longer take a passive, but an active attitude in providing better equipment. With the appointment of a full-time commissioner, there should also be much more efficient supervision and regulation of athletics pertaining to the state as a whole and in their relations one to another.

Another of the larger problems is to find out fundamental facts which we do not now possess. Who would dare say that all of the athletic program that the public in general approves is desirable and valuable? We say that the boy with a weak heart should not play basket ball and that the boy who is strong and robust may. These two extremes fuse into the mass, some of whom are in the so-called "twilight zone." It is a problem of research to determine what type of athletics is most valuable to individual boys and individual schools. It has been my hope that the newly elected commissioner may be able to devote a considerable part of his time to problems of research, and that within the next four or five years Ohio may at least make some real contribution to the solution of athletic problems; and that we may do our share as a state in helping to define the function of high-school athletics and helping to state what is their proper relationship to the rest of the school program.

The third and last problem to which I shall refer is that of getting greater enjoyment out of athletics. In many cases competition has become so keen between athletic rivals that all the joy has been taken out of life. It is not an uncommon sight at the close of an important contest to see pupils, parents, and others leaving the game with tears in their eyes, even sobbing and hysterical. One might get the impression that they had just attended the funeral of their dearest friend. I do not mean that players are to assume an attitude of indifference, nor that spectators are to view the game without enthusiasm. That would be con-

trary to the nature of an athletic contest. I mean that through the exercise of self-control, and by assuming the right attitude whether we win or lose, we can get much more enjoyment out of athletics than we often do. Last summer I happened to attend a major-league baseball game between Boston and Washington. It was an ideal afternoon. I attended the game for recreation without caring particularly which team won. It was a good game and I enjoyed it. I came away from the game, not with tears in my eyes because one team lost, but happier and refreshed for having attended.

Supervision, research, enjoyment, are three words which suggest to me three important problems in athletics for us to solve, with the added thought that it is to the principals, faculty managers, and coaches that we must look for leadership.

STATUS OF PHYSICAL EDUCATION IN OHIO

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A summary of the present status of the teaching of physical education in Ohio includes several interesting phases. A general attempt is being made throughout the state to comply with the new law requiring the teaching of physical education at least one hundred minutes per week. A few cities have eliminated physical education in an effort to practice economy. Such procedure is false economy, as is any step which interferes with positive improvement of health and conservation of good health. Physical education is remarkably well taught, considering the short time it has been offered on a state-wide basis. In most cities special teachers and supervisors largely assume full responsibility for the work. In smaller systems and in rural districts the regular teachers usually give the instruction.

A broader program is needed in many of the smaller schools. Present narrowness of program may doubtless be explained by the fact that the conduct of classes in physical education is new to many teachers. Normal courses in the past have placed very little emphasis upon physical education. The work in general,

therefore, at the present time, is not of the well-balanced and organized type which the law intended for all-around physical development. In some schools it consists largely of formal exercises of various kinds, in others of directed play, in others of folk dancing, story plays, and rhythmic exercises, and in still others of competitive athletics.

A course of study known as physical education and hygiene has been written under the direction of the State Department of Education and Health, and has been distributed throughout the state. The purpose of this course is not merely to suggest procedure and to furnish subject-matter which may be utilized in daily recitation but its greater purpose is to awaken a better understanding of the real value of physical education as measured in terms of all of the greater objectives of education. The course aims to show that physical education is not a supplement to the general school program. The following objectives are suggested in physical education and hygiene as worthy of attention by all physical-education teachers and supervisors.

1. Cheerful performance of proper health habits.
2. Initiation of a desire for physical growth in youth, for physical preservation in age, and correction of physical weaknesses and defects at all times.
3. Sufficient hygienic study that individuals may form an intelligent judgment about their health which will carry over into adult life.
4. Development of such potential qualities as courage, self-sacrifice, devotion, loyalty, obedience, honesty, and courtesy.
5. Establishment of such ideals of living and of social relationship as will lead to the formation of right personal standards of living.
6. Creation of an interest in the physical welfare of others.

There has been a decided change of attitude on the part of the public toward the teaching of physical education and toward health work in general. When the teaching of health and physical education was first emphasized, many felt that this work was only one more frill which had been added to the already overcrowded school program. Today, however, parent-teacher associations, mothers' clubs, the farm bureau, the grange, and many other organizations are cooperating with school and health authorities with the result that health is in reality quite generally accepted as

one of the chief objectives of all educational procedure. But physical education includes much more than health alone—it includes the building of right standards of citizenship, leadership, character, and many of the finer qualities of life in general.

SMALL TOWN AND RURAL PROBLEMS IN PHYSICAL EDUCATION

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Practically three-fourths of the states of the Union, during the past decade, have turned to the physical education of their school children in the attempt to better the health and physical condition of their future citizens. The scope of physical education, to meet this situation, must be enlarged to include the following phases:

1. An annual physical examination for ascertaining the common physical defects. This phase would not include postural defects.
2. A daily physical inspection of pupils for the detection of early symptoms of illness and communicable diseases. In this phase would be included constant supervision of environing factors, as heat, light, ventilation, and cleanliness.
3. The teaching of health habits which will include those items that function as basic factors of healthy living in the everyday life of the child.
4. A program of physical activities having physical and educational values in addition to their moral-social contributions in providing standards of personal and group conduct in wholesome social situations in the gymnasium, on the playground, and athletic field.

The urban system of administering such a program by physical educators, nurses, and doctors, is physically and economically impossible for small towns and rural districts. Hence, the responsibility for administering the program of physical education rests upon the classroom teacher in all of the states obligated to the physical education of their children. This fact is no serious

obstacle in the promotion of state programs. On the contrary, there are good arguments why the classroom teacher should be entrusted with the physical education of her pupils, provided that her program is outlined, and provided further that she has had training for this important phase of her job.

In Virginia, where the speaker inaugurated the program of training the classroom teacher in physical education and supervised its operation for four years, the minimum amount of time necessary for the training of the classroom teacher is six semester hours, divided as follows: two hours for the physical education of the prospective teacher; two hours for theory, methods, and practice teaching of the physical education for school children; and two hours for acquainting the teacher with the principles of personal and public hygiene, with the detection and control of communicable diseases, with the method and practice of conducting physical examinations, and with state laws regarding quarantine, exclusions, readmission, and vaccination.

The advisability of the classroom teacher's responsibility for the program was then discussed. It was emphasized that there is likely to be no exception made to the teacher handling the third and fourth phases of the program—the principles of healthy living and the physical activities—for these have been considered as parts of the educational process for years. A difference of opinion may exist as to the soundness of that pedagogy, which would require the teacher to give physical examinations and to watch for the appearance of communicable diseases, for these two phases of the program are not educational processes, but factors of health control, and within the province of the physician and nurse, only.

This attitude prevailed at several national health conferences a few years ago, but the experience of various states and cities which have made the teacher the administrator is quite at variance with the opinions of these health conferences. In fact. where professional services are available, the suggested scheme of having the teacher handle physical examinations saves the time of the doctor or nurse for re-examination of pupils found defective. Furthermore, it leaves a majority of their profes-

sional services for the correction of defects—the crux of the whole matter of physical examinations.

The procedure for handling the physical examinations is so simple that it is a reflection upon the intelligence and observation of the teacher trained for the task to infer that she cannot weigh and measure children and compare results with the standard-weight chart for determining underweight; that she cannot test the vision with the Snellen eye-testing card, the hearing with the conversational voice, the skin for eruptions and sores, and for evidences of impetigo, the neck for swollen glands and goitre, the teeth for evidences of irregularity and decay, with particular attention to the sixth-year molars and to other permanent teeth; that she cannot observe mouth breathing, and check for signs of vaccination. So much for the teacher's ability to handle the annual physical examination, but what of the daily physical inspection?

On the subject of the teacher's handling the daily physical inspection for early signs of illness and for symptoms of communicable diseases, Bulletin Health Education Number Eighteen, United States Bureau of Education, says: "When it comes to recognition of communicable diseases in schools, there can be no substitute for the teacher, as neither a doctor nor a nurse can always be present. The teacher knows, or should know, better than anyone else, the normal behavior of her children, and can the more readily detect variations from that normal which may indicate the onset of the disease." The usual symptoms for the teacher to note, in addition to behavior, are flushed face, unusual pallor, inflamed eyes, running nose, cough, skin eruptions, and swollen glands of the neck. Constant attention to ventilation and to temperature is quite an important factor of the daily health control. Inability to handle all of these items of the daily physical inspection would seem to discredit a teacher's ability and native intelligence after having had training for the task.

Granted, then, a comprehensive program of physical education and a classroom teacher trained to handle this program, the problems of physical education in small towns and rural districts

will be solved in proportion to her diligence and conscientiousness. It is reassuring that never yet has she failed to meet any issue.

MODERN TENDENCIES IN EDUCATION AND THEIR RELATION TO PHYSICAL EDUCATION

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The present is a time of change, of new movements, and new activities. The changing conditions in the home and the community, increased school attendance, especially in secondary schools, greater aggregate costs, provided largely by direct taxation, all present serious problems. The schools must present a program that will best fill the needs that exist.

In meeting the challenge to provide efficient training in the present situation, general education shows several well-marked tendencies. The aims and purposes have been clearly defined. Efforts are being made to provide a better and more vital curriculum. There is also an increased emphasis on moral and religious education, in which schools are cooperating with other agencies. Scientific procedure is being applied to the problems of education. Examples of this movement are seen in the planning of buildings, and in the use of measurements, both of intelligence and of achievement. The use of measurements is playing a large part in the improvement of teaching technique and the verification of educational theories. These tendencies in general education should find their counterpart in physical education.

As in general education, the curriculum for physical education should be carefully planned and analyzed. If we plan for the objectives just stated, what elements and habits of health and character, of preparation for leisure, of citizenship, might we provide in our program? For example, cooperation is one of the fundamentals of citizenship in which our work should definitely give opportunity for practice. Leadership is another quality we should provide for. The good citizen has initiative, shows good sportsmanship, is honest, and above all, is not narrow,

intolerant, nor provincial. The elements of character and of worthy use of leisure would be planned for by means of a similar analysis.

We would also arrange our activities in the light of the thesis that "the first duty of the school is to teach pupils to do better the desirable things they would do anyway." Formal activities will probably receive less emphasis than formerly. Outdoor games for small groups will be more definitely stressed. All pupils will be kept in mind. Interscholastic athletic contests, especially for girls, will be given less attention than is often the case now. Work will be of such a nature that it will have the pupils' spontaneous interest, either natural or acquired.

There is room for the application of scientific procedure in physical education. Buildings and outdoor space must be planned to meet the new program. Measurements for the validation of objectives and the improvement of methods should play a large part. Can we show that our program develops character and increases the variety and scope of worth-while interests and activities? Are the means used to reach these ends the most effective?

Workers in physical education should ask themselves these questions:

1. Are our aims comprehensive, specific, and in form to be readily understood by workers in all fields of education? Are they in line with the ideals of general education?

2. Are our curricula arranged to reach our specific objectives? Are we planning such activities and experiences as will most probably accomplish the end for which we are striving?

3. Are our methods built on a sound basis according to the findings of modern psychology and educational investigation?

4. Can we justify our aims, our materials, and our methods by means of carefully measured and objective data? Are we developing a technique for verifying and improving our means of procedure scientifically?

5. On the answers to these and similar questions will depend our help from other educators, our support from the public, and our greatest service to the pupils in our schools.

SUMMARY OF THE STATUS OF BASKET BALL FOR GIRLS

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This does not pretend to be a conclusive report, since the conditions in the state are extremely varied. I will talk on several phases of physical education as I know them. I don't want to tread on anyone's feet, but I will discuss facts as I have seen them in interschool games, men coaches, and training of women coaches.

I. The types of basket ball in Ohio are the interschool, county tournaments, factory teams, interclass.
   A. Interschool
      1. Characteristics
         a. One or two games a week are played over a period of three months.
         b. Rules vary to suit the home team, resulting in a lack of consistency in the type of game. This year the condition was better because many coaches agreed beforehand.
      2. Advantages
         a. This organization gives opportunity for games for schools too small to have enough material for more than one team.
      3. Disadvantages
         a. The teams feel a nervous strain.
         b. A mixed audience leads to "grandstand" play and roughness.
         c. There is a tendency to use the best girls regardless of their physical condition.
         d. It exploits the girls—becomes "physical straining," instead of physical training.
         e. The modes of travel are often unsatisfactory.
         f. Gym conditions such as temperature and floor plans differ, causing difficult adjustments for a team on short notice.

g. The aim of the game is to win, which develops questionable sportsmanship and hard losers.
h. The coach's time is expended on a few, which is not the aim of physical education.

B. County tournaments
1. Disadvantages. To those of the interschool are added:
a. A great number of games are often played on two successive days. Two Saturdays could be used, with divisions into Class A and B where entries were large.
b. There is often no care of teams between games.
c. Since expenses must be made teams are not considered as they should be.

C. Factory teams
1. Disadvantages
a. They are semiprofessional.
b. They gain unpleasant newspaper notoriety.
c. They play under boys' rules.

D. Interclass basket ball
1. Advantages
a. The coach's time is used for many.
b. They use only girls who are in good condition.
c. The audience can be regulated if desired.
d. There is no additional expense.
e. There is no great nervous tension.
f. The aim of the game is to win but also to play a good game for love of the playing.

II. A reading from Miss Schoedler's report as secretary of the National Amateur Athletic Federation followed.

III. Rules in various parts of the state
A. The one-line, six-girl game is popular.
There are still some with no lines and boys' guarding.
B. Many official exceptions to rules exist.
Some men coaches cause various interpretations of girls' guarding.

C. Need is for good women referees and trained women coaches.

IV. Aim of state chairman

A. Rules should be standardized by leagues in all counties.

B. Better women referees should be obtained by means of a list of "approved officials" from which referees will be recommended upon request.

C. Cooperation of coaches, managers, school boards, with the state chairman, should be secured.

THE RELATION OF SOCIAL HYGIENE TO EDUCATION

GERTRUDE TRANSEAU
State Chairman on Social Hygiene, Ohio League of Women Voters

At the present time social hygiene is being taught by many intelligent parents. Personally I believe it is first and always a subject for parents to teach. At home the subject is incidental, natural. Ideas come gradually, and questions come up occasionally. If questions on all subjects are explained on the level of the child's intelligence the question as to the origin of life itself takes its place without undue emphasis among the many other subjects the child is investigating.

Unfortunately all parents do not have the necessary knowledge nor the vocabulary which would enable them to teach their children the fundamentals of the subject. Moreover their attitude is not always frank and honest, and without a suggestion of fear or shame. Parents are often silent because they do not know how to approach the subject, and so fail to do their duty to the child. Many parents shut their eyes to the problem, forgetting the street with its bad companions, its vulgar terms, and its misinformation. The child is searching for the truth—the greatest passion of the human mind is for explanations that are mentally satisfying—and the parent who lies or evades questions, or puts the child off "till he is older," loses the confidence and complete devotion of that child forever afterwards. For these reasons most parents fail and we must turn to other groups to teach social hygiene.

Teachers of physical education are in a peculiarly strategic position for presenting social hygiene. The instructor and student through the physical examination have a more informal and personal relation.

Classes in physical education might do well to meet occasionally for the interpretation of sane exercise and applied hygiene; social hygiene would be a natural part of such a course. The usual one or two lectures on social hygiene given to high-school and college students out of a clear sky, unrelated to any previous preparation, are not good pedagogy. It is as confusing and futile as one or two similarly unexpected lectures on a principle of mathematics or astronomy.

The basis of social hygiene lies in many sciences; anatomy, physiology, embryology, hygiene, biology, sociology, eugenics, and particularly psychology. Through courses of instruction these sciences as applied to social hygiene can be interpreted to any group of any age.

The public schools, usually through outside pressure or suggestion, are beginning to include instruction in social hygiene. In Ohio, Cincinnati through its social-hygiene committee has made a demonstration under skilled leadership of just what can be accomplished. Data, gathered after a large number of courses had been given, prove conclusively the value of education in this most neglected of all of our educational subjects.

Teachers are the first to see wayward tendencies among the boys and girls, though they are not in a position to give much constructive aid. Visiting school nurses, trained in social hygiene, are doing an enormous amount of good at the present time. They form a link between the home and school and take care of the precourt cases. The most hopeful preventive measure yet undertaken for juveniles is the skilled care of the child who is headed toward the juvenile court. Here in the field of prevention many children can be started on the right road. Of course many cannot, but the earlier the difficulties are diagnosed the greater the chances are that the child may attain success. The clergy is awakening to a sense of responsibility and encourages discussion of social-hygiene topics in special classes, principally in

councils for fathers and mothers. Physicians can help. Unfortunately they are not consulted as much as they might be. Physicians as speakers on the subject are often accused of dwelling on the pathological side of the question, and no wonder when they see daily the heart-breaking results of ignorance. Social workers, court workers, and probation officers spend their lives helping the unfit to better their adjustment to society. The unfortunate part of their work is that it is usually not preventive.

Certain organizations also offer information. The Ohio State Board of Health publishes a bibliography of their literature, which they send on request. The American Social Hygiene Association, 370 Seventh Avenue, New York City, cooperates with those interested in many ways, through programs, and loaning books. The Ohio League of Women Voters, 20 South Third Street, Columbus, Ohio, furnishes literature and suggestions for courses of study; speakers are sometimes available.

Briefly, an ideal program for the teaching of social hygiene is something like this: teach the child under eight to ten years the fundamentals of the subject. During these early years the child is developing his permanent emotional set-up. These are the important years for education in social subjects. Teach through example of parents an unembarrassed attitude on the part of the child. Teach cleanliness, and self-control in all things; through regular and disciplined eating (a passion for candy is as pernicious as any other uncontrolled desire); regular bed time, regular and sufficient sleep; consideration for the rights of everyone. We cannot teach self-control along one line; to attain it we must learn control in all things.

As the child grows older he needs more help. The pre-adolescent or the adolescent will fare better through this stormy period if his parents and teachers understand him and make some allowance for his moods and various emotional states. These states of mind and body can be explained quite simply and information is eagerly and appreciatively received during this period if the subject is properly approached. In other words, we are striving to build character, and in our teaching we do not ignore any of the basic instincts upon which character is built.

NATURAL GYMNASTICS IN THE PUBLIC SCHOOLS

HELEN SMITH
University of Cincinnati

The present era of physical education is marked by two viewpoints, two conflicting ideas as to purposeful and efficient methods of exercise. The one method clings to the formal gymnastics of the calisthenic type, taught by the response-command method; the other relies on satisfying the needs and instincts of the individual, through a program of games, dancing, and natural exercises, under careful leadership.

Physical education should be objective rather than subjective; the old gymnastics deal with form, with the way an exercise is performed; the new deals with accomplishment. The old emphasis was upon material used, the new upon individuals served. Physical education should not aim to train a perfect human machine, but it should strive to develop physical and mental assets, and make social beings rather than automatons.

The difference between formal and natural gymnastics lies not only in the content and in aims, but also in the manner of presentation. The formalist is a director, the naturalist a leader. Through a natural program we gain initiative, imagination, alertness, good sportsmanship, posture, and many other desirable characteristics. In a formal program the majority of these values are lost.

The work carried on by the University of Cincinnati and the Demonstration School connected with it, has for three years been a natural program and has met with great success. The pupils are interested and cooperative, and by means of that interest and cooperation, they are gaining certain desirable values which help them to build their own lives. Physical education as well as other education should mean preparation for living.

RELIGIOUS EDUCATION

C. C. McCracken, *Ohio State University,* Presiding

THE LARGER RESPONSIBILITY FOR RELIGIOUS EDUCATION

Arthur T. Arnold

Secretary, Ohio Council of Religious Education, Columbus

In July of last year a group of Americans touring Europe made a pilgrimage to Delfts Haven from The Hague to attend service where the Pilgrim Fathers worshipped before embarking in their frail craft for the new world. In company with a cultured Hollander we stood upon the historic wharf with imagination running riot, reproducing the scenes and living again the experiences of the Fathers who lifted anchor and set sail to find for themselves and to assure to others religious liberty.

These men of iron with strong religious convictions were the founders of the nation we are still building—a nation powerful, prosperous, influential, though still in her swaddling clothes, for American democracy is not yet beyond the experimental stage.

Religion, as well as religious liberty, was essential to the foundation laid for the nation by the Pilgrims, which they hoped might be as enduring as the everlasting hills. With rare wisdom and consummate skill the framers wrote religious freedom into our constitution.

With this and a like guiding principle, the separation of church and state, we have developed our system of general education, undertaking to disseminate knowledge and culture to assure to the state intelligent, upright citizens, capable of performing the duties of citizenship.

It might be noted that among the textbooks of New England in the eighteenth century were not only the primer and spelling book but the Psalter, the New Testament, and the Bible. Instruction in these texts was thorough. Public-school buildings were dedicated as were churches and were used freely for religious purposes. Christian education was a part of their system,

and its continuance and development is therefore in harmony with their educational standards and religious ideals.

In the days when a particular group of believers predominated their policy was possible. With the multiplication of sects among our citizens whose constitutional rights were not to be infringed upon, schoolroom instruction at variance with the traditions and convictions of these faiths was of necessity gradually abridged and discontinued.

Let us not conclude that religion is to be divorced from our system of education, for the doctrine of separation of church and state does not imply exclusion of religion from our schools. Without religion the great objectives of education are unattainable, because the final forces of human life are spiritual, and moral bankruptcy more than intellectual poverty is the cause of failure. Horace Mann once declared that "Ten men fail from moral defect to one who fails from intellectual defect." Where life has gone well the spiritual has been guarded and nurtured.

In the state's program of education there is an indirect method of religious teaching. It may be called a corollary of devout scholarship. Our teachers and supervisors are usually men and women of faith and character, and they exert a powerful influence for good upon the moral and ethical standards of our youth. The appellation "godless schools," applied now and again to our system, is unwarranted, for our schools are as religious as are those who supervise and teach them.

Religious teaching is the state's imperative duty. A reverent reading of the Scriptures in a devotional atmosphere and a study of the Bible as literature, history, and biography is valuable, but it does not constitute an adequate program of religious education.

Religious education from the Christian viewpoint implies the teaching of the Bible in such a way that the pupil may appropriate its values and gain a religious experience and a richness of spiritual life which will find expression in worship and service. Religious teaching is insufficient, though a valuable aid in the development of character.

Teaching religion by the direct method is within the province of

the home and church. This responsibility, divinely ordained for home and church, the state cannot undertake.

It is the duty of the state to establish and maintain a system of tax-supported public education free from ecclesiastical control. It is the privilege of the church to establish and maintain a system of church schools for the teaching of religion.

It is significant and heartening to know that with the growing conviction of the imperative need for a greater religious emphasis, through a more effective program of religious education, there has come the spirit of sympathetic, helpful cooperation between parents and the leaders in church and school. Numbers of communities and cities have syndicated their resources, determined not to permit sectarian bias to run counter to community interests. On the basis that all of us are stronger than some of us they believe that where combination is possible competition should be made impossible by finding, through the round-table method, a common denominator that will include the essentials of faith held by a cooperating group.

Our larger responsibility in religious education is not to be assumed for the sake of the church or any institution primarily, but for the sake of character and the higher life, for intellectual, social, racial, civic, industrial, and international regeneration. Through religious education we aim to produce the most favorable conditions for religious development. It conceives of the individual as a force in the community, living amongst his fellows, guided by the principles of justice, mercy, and love.

Human welfare, individual and social, here and now,—not self-preservation—should be the ultimate objective of the church's educational endeavor. The church is "to minister, not to be ministered unto."

The moral and religious welfare of the young life of every age has been a matter for deep concern and ours is no exception. Never has there been a time in the history of our country when the influence of skepticism was greater than at the time of the American revolution. About 1790 the students of Yale University assumed such nicknames as Rousseau and Voltaire to let it be

known who their heroes were. In a certain graduating class there was but one professing Christian.

The present situation in the moral realm is the result of one of those waves which come in an age of restlessness, but under the billow is the great depth of the ocean into which it will subside. Our young people are the first to catch the atmosphere of frivolity and daring in the midst of our prosperity today. In the delirium of modern life with the aeroplane, radio, auto, sports, and folly, they are apt to look back on the quiet past as out of date and upon father and mother as back numbers. The new poetry, the new fiction, scoff at the foundations held sacred by the builders of our government. In absorption in the stupendous accomplishments of science and invention they forget the spiritual.

Education, general and religious, is always a matter of vast importance, but its need seems to be more imperative today by reason of the momentous issues and perplexing problems which we, and the other nations, are confronting. We are in a race between education and a world cataclysm. We believe education can win.

The home is realizing that along with our material advancement we must have moral grandeur, and the call of the home today is for a more effective program of character building because of the inadequacy of a program which majors upon mental, physical, and vocational fitness. This moral appeal of parents, born of a consciousness of imperative present-day need, cannot be disregarded if we do our duty to our young life.

Our schools are free and open to all children irrespective of creed. The problem in America is particularly difficult because we have nearly three hundred denominations. Those who would proceed without due regard to creedal differences should be warned of the dangers of intensifying religious conflict. In an adaptation of a statement made recently by Premier Baldwin of Great Britain, I would say—"America, steady! Look where you are going. Human hands were given us to clasp and not be raised against one another in fratricidal strife."

Let us get a vision of a workable plan dominated by peace, characterized by good will, mutual toleration, and service under which we can work together for the sake of saving a civilization

hanging in the balance. With seven out of ten of our children and youth in the United States without religious instruction, unreached by the educational program of any church—Jewish, Protestant, or Catholic,—there comes a revelation of appalling spiritual illiteracy which gives us deep concern and leads us to conclude that there is imperative need for the giving of our lives cooperatively in service for a more effective program.

Catholics are trying to solve the problem with the parish school. A like policy pursued by Presbyterians, Lutherans, Methodists, Disciples, Baptists, Congregationalists, Episcopalians, and other denominations would paralyze our public-school system. The enlarged thinking which has come to those of Protestant faith has resulted in a correlation of the Sunday school, vacation, and week-day schools under the term church school.

The Sunday school is still central in the Protestant program. With 20,000,000 enrolled in its membership it has become Protestantism's chief educational activity. Its possibilities are still great and for a long time to come it will not be superseded. Its limitations have been a handicap but in spite of them it has delivered great blocks of moral fibre to the childhood and youth of the nation. The fact that its sessions were limited to a brief time on Sunday proves the truth of G. Stanley Hall's statement—"not the constant ringing of the bell, not the drill through years that counts; some of the finest impressions are rapidly made—the distinctive thing that comes in a little time."

The Sunday school, however, will never be able to provide an adequate program. Its teaching impact does not carry over sufficiently into the seven-day period. The vacation school for the children of the lower grades at a time when they are out from under school supervision has made a valuable contribution, but our chief hope for an adequate program lies in the development of the week-day church school of religion, which is ideally professional, put on an academic level with the public school, where all the children whose parents desire it may be taught the Christian religion. With the opening of such schools there has come quite a general acceptance of the idea that the state has no right to so monopolize the time, strength, and interest of the pupil as

to hamper the teaching of religion. Today religious education finds place in the daily school schedule in buildings provided by the community, on a par with history, mathematics, and geography. An after-school period with our Protestant liberty is apt to be meagre.

Because of the imperative need of religious education in our national life, it is of strategic importance that greater facilities be provided for the training of leadership. We must conceive of the work in educational terms that it may be set in right relation to the factors of human life which operate to shape the growth and education of the souls of men.

Our great responsibility then arises because men need the great, noble, enlarging culture of the heart, because we believe in righteousness and truth and a square deal and because through religious education men come to discover God's law and obey it.

The world needs men of Christian spirit, who can contribute ideals, not money. Paul, Martin Luther, Zwingli, Calvin, Huss, together did not have as much cash as the pin money in the pocket of a modern life-insurance agent. Religious education will help give to our needy world men who can render such service.

RELIGIOUS EDUCATION FROM THE PRINCIPAL'S VIEWPOINT

H. F. Vallance
Principal, Indianola Junior High School, Columbus

The experiment with religious instruction in Columbus has been both limited in extent and short in duration. After many conferences between representatives of the Franklin County Council of Religious Education and representatives of the Columbus Board of Education, it was finally decided to introduce courses in religious instruction in two of the Columbus Schools. Northwood School and Indianola School were chosen for the experiment, which was to be limited to the elementary grades, third, fourth, fifth, and sixth. For reasons which need not be discussed here it was not deemed wise to use the public-school buildings

for this work. Two neighboring churches offered space for the classes, each of which meets one hour a week.

In order that no pressure might seem to be brought to bear upon any patrons of the schools, cards requesting that their children be allowed to enter these classes were sent to the parents of all children of these grades. Those children whose parents returned the cards were enrolled in the classes. In passing it may be added that fully ninety-five percent of the pupils were enrolled immediately and a few were added later. Very few parents have since asked that their children be excused from the work, and these mostly because of the inconvenience of attending a school remote from the day-school building, and occasionally because of inclement weather.

The teacher and equipment were provided by the Council of Religious Education, which also outlined the course of instruction. The experiment has extended to date the current year. It may easily be seen that it would furnish very slight material upon which to base a point of view, though it has brought the principals some problems, chiefly those of discipline, of handling those few pupils who do not attend the classes in religious education, and of proper use of the regular teacher's time while the class is away. The results to date are wholly inadequate as a basis of opinion on the value of religious instruction, and are quite unmeasurable except in the knowledge of the Bible and religious information gained. My point of view, therefore, can scarcely be said to be based upon experience.

It will hardly be denied that there is need of moral or religious training among the youth of our schools. If I had any quarrel with our teacher-training schools today, it would be upon the ground that practically all the emphasis is laid upon the technique of teaching and grasp of subject-matter, with apparently little or no thought upon those good old objectives of education—training for citizenship and formation of character. I fear that the modern teaching against fixed standards is conducive to deterioration of character among our youth, because it is likely, through being misunderstood or misinterpreted, to lead to scant respect for all standards of conduct as well as of learning. Youth is impulsive;

its rashness is proverbial; it tends strongly to go to extremes, and unless this doctrine of relative standards is carefully guarded and wisely presented, youth is likely to get the view that "Nothing matters much. Why worry?" For my part I shall accept the theory *cum grano salis,* as our Latin friends would say, but shall continue to believe, and to teach the boys and girls committed to my charge that it is wrong to steal, that it is sinful to cheat or to lie, that it is harmful to abuse our bodies—for growing boys to smoke cigarettes, for example, and that it is the absolute duty of the citizen to obey his country's laws, whatsoever may be his opinion regarding the usefulness, wisdom, or justice of these laws.

Is there a need for religious instruction in our schools? Those of us who have had even a slight experience with children of the junior and senior high-school ages know that there is ample evidence of various sorts of immorality among them. Nor is it confined to children of these ages; I have been shocked and amazed at the profane and obscene speech, and at lying, stealing, and various forms of dishonesty frequently found in children of tender years in the elementary grades. Might it not be hoped that had some religious training been given these children in their earlier years and continued throughout their school careers much of the delinquency of our youth would have been avoided? How about training up a child in the way he should go?

I believe that religion is the most effective vehicle for teaching morals. In fact I do not conceive that the two are different. There seems to be inherent in man the religious instinct which, properly directed, leads him upward toward the heights of cleanest living, highest thinking, and greatest spiritual development. I believe in definite and direct teaching, for morals and religion as well as any other subject. Knowledge alone will not develop character; religion is essential to the complete development of man. Theodore Roosevelt says: "Educate a child's mind and not his heart and you create a social menace." Much of the subject-matter taught in our schools will soon be forgotten but the moral principles instilled and the moral standards established in a child's life become a permanent part of his educational heritage. Morals can be taught; experiments of Voelker at Columbia University

show that in the case of one boy an increase of two hundred per-cent in trustworthiness was accomplished in three months. He tested many other cases with less marked but eminently satisfactory results. Experiments in the University of California confirmed the conclusion of Dr. Voelker that it is perfectly possible through definite instruction to develop moral character in children.

As a principal I am interested that the boys and girls of my school have a modern and thoroughly equipped building in which to pursue their studies under the guidance of teachers well trained in the science and art of teaching and well versed in the subjects they teach—men and women of personality, culture, and character, who teach and practice the gospel of service. I am interested in a broad and full curriculum of studies designed to bring out the best that is in these boys and girls; I believe in the careful supervision of instruction that curricula may best be adapted to supply the needs of those who learn; I even believe in relative standards of life and conduct, provided I can believe also that they are correct standards growing better. I am interested in these things for our boys and girls only in so far as they contribute to my job of helping my pupils grow into worthy and useful citizens.

Therefore, I believe that religious instruction should be made a definite part of the instruction offered our children of all school ages. I believe the time taken from other subjects for this purpose would be well spent and should be, therefore, within the school day. I believe that instructors specially trained for this important and difficult work should be provided at public expense, and that the curriculum content in these courses should be selected by responsible representatives of the public schools. The classes should meet in the public-school buildings under supervision of public-school principals. Moreover, I go so far as to believe that the basis of instruction should be the Christian religion and the Holy Bible, taught without bias or sectarian emphasis—a matter wholly possible.

The keynote of this conference is "Democracy in Education." Assuming the need of religious instruction I commend the Christian religion as the only truly democratic religion known to man.

It is not always—it is to be regretted—administered in a democratic manner, but its principles are simple and intelligible to all, and its benefits are universal. Dr. Charles Foster Kent of Yale says, "Christianity is preeminently a social religion. It emphasizes not the racial but the universal bonds of human brotherhood. It aims, by training the individual conscience and will, to establish a closely knit, world-wide fraternity. It glorifies humanity and all human relations. It is in no sense ascetic. Instead of taking men out of the world it seeks to develop perfect, god-like men in the midst of society, and through them to solve the problems of society." I submit that such a religion can safely be taught to the children of all races and creeds in America without offense or hurt to any.

I am willing to stand for the Christian Bible as the chief medium of religious instruction for the children of America, if America is to remain a Christian nation. Dr. Albert Stanburrough, also of Yale, one of America's foremost scholars, writes, "In this period, when, perhaps more than for centuries, the human race is distractedly calling out for the bread of life, and asking on all sides, Who will show us any good? it is perfectly fitting that a nation like ours, upon which the ends of the world are visibly come, should turn in all ways to the Bible, which has accompanied the English people on their pilgrimage for centuries to which the American Revolution is as yesterday. Whatever else the English Bible is, it is a treasury of good sense, good morals, beauty, cheer, and inspiration and there is nothing that America, in common with all the world, needs more today." I would not of course, limit religious instruction to that book alone, nor would I teach all that is in the Bible, though there is little or naught in it that need be of offense to any open-minded, intelligent person. But careful and judicious selection of parts for study can be made which will prove of value to all and of harm or offense to none. Besides, I think we need not be too squeamish about the sensibilities of any among us whose feelings are continually exposed with the seeming hope and expectation that they may be hurt. There is need of courage in dealing with all our problems, including those of morals or religion. Very few important matters can be

settled without injury or offense to some. We must face our problems with the larger good in mind. Enough subject-matter can be chosen from the Bible upon which all can agree, and which can be taught without offense to the children of Jew or Gentile, Catholic or Protestant. But whether some are offended or not, we cannot and should not dodge the issue. We should hew to the line and let the chips fall where they may. The schools of America must have the courage to seek the truth and the freedom to teach it, whether that truth be religious, historical, or scientific. Religious truth is as capable of demonstration as is much other of the teaching in our schools that passes for truth, or is taught in the name of truth. Society has come to a sorry pass in an educational sense when it forbids teaching evolution or other theories that are evidence of man's striving after truth. The state of Tennessee abrogates the Bible which she seeks to defend when she denies her teachers the legal right to follow the injunction:—"Seek ye the truth, for the truth shall make ye free." If our constitution and laws be construed as forbidding religious instruction in public schools at public expense, it is possible to change them.

Believing then as I do, that religious education offers the schools the best opportunity for the upbuilding of sterling character; that it presents the possible solution of the problems of society on the bases of good will and mutual understanding, and that these are the only bases upon which the problems of the world can be solved, I, as a principal, welcome the introduction of such instruction into our public schools. I would have the boys and girls of our land trained in the knowledge of the Book of Books and in the principles of the religion founded by the greatest of all teachers, in which He taught, by precept and example, the doctrines of peace and good will, brotherhood and service. Idealistic and Utopian as these principles and doctrines may seem at this present hour, I commend them as the only practical basis for the solution of the problem—How shall the people of the world be saved?

SCHOOL LIBRARY

HERBERT S. HIRSHBERG, *Librarian, Ohio State Library,* Presiding

THE LIBRARY—AN INDISPENSABLE DEPARTMENT IN THE SCHOOL

C. C. CERTAIN
Supervisor of School Libraries, Detroit, Michigan

THE LIBRARY IS A PRACTICAL NECESSITY IN THE PUBLIC SCHOOL

I am right, am I not, when I say that the more vitality you give to your schools, the more activity you stir within them, and the more you increase the need for a great variety and abundance of instructional materials—books, pamphlets, magazines, newspapers, pictures, stereographs, slides, motion-picture films, maps, globes, industrial and art exhibits, and so on. And you will agree with me, I am sure, that the more abundantly these materials are supplied the more important it is they be organized with discrimination and with a view to convenient and continuous use throughout the school. The more active the interests within your school, the more need there is for library service to handle the materials of instruction. Delays in supplying working materials cause havoc to work in the classroom. When boys and girls have their active interests stirred as enriched school curricula stir them, they must be given the means of active expression.

1. *It coordinates school and community.*—Library service provides this means of active expression. It, furthermore, helps to regulate and to stabilize the movements of active interests in the school. Consider for example, the round of special days, seasons, and occasions which do so much to coordinate experience in the school with the experiences of life outside of school. The librarian anticipates the coming of these occasions. She compiles a list of them many months in advance, and begins looking for and buying special books, pamphlets, newspapers, and magazine articles, pictures, and slides. Not only this, she confers with both teachers and pupils, in groups and individuals, several weeks in advance,

asking their needs. In consequence of her interviews, her reminders, the school is ready for the special day or week when it arrives. Work in the classroom blends with the spirit of the occasion, and does not clash with such activities as Arbor Day or May Day programs.

The librarian does not stop with mere conferences. She assembles her material and exhibits it with timeliness. She prepares attractive displays for bulletin boards. Through her exhibits and displays she creates an atmosphere of interest that calls forth expression in the right key, at the right time.

Let me read to you a selected list of days and special occasions to represent to you the scope of this phase of library service.

Special Days	Dates Approximate	Teachers Directly Concerned
Constitution Day	September 16	Social science, auditorium
Columbus Day	October 12	Social science
Fall Arbor Day		General science, literature
Hallowe'en	October 31	Literature, auditorium
Armistice Day	November 11	Social science, auditorium
Thanksgiving	November, last Thursday	English, social science, auditorium
Whittier's Birthday	December 17	English
Christmas	December 25	English, art, auditorium
New Year's	January 1	Auditorium
Franklin's Day	January 6	Social science, general science, composition
Washington's Birthday	February 22	Social science, English
Lincoln's Birthday	February 12	Social science, English
Longfellow's Birthday	February 27	English
Shakespeare's Birthday	April 23	English, auditorium
Spring Arbor Day	April 27	English, general science, social science
Special Weeks		
State Fair	Fall	Social science
Fire prevention	October 2-9	Social science, auditorium
Appeals for Public Welfare		
Red Cross enrollment		All teachers
Home and school gardens		General science
School Organizations		
The school paper		
School plays		
Boy Scouts		

Through the efforts of the librarian, these days, special weeks, occasions, become events of creative interest, periods of active expression in school life. The librarian accomplishes this as has been indicated. She provides materials systematically and economically with the least duplication—organized to serve the greatest possible number of children with the least possible confusion and in the most effective way. These special events, as a result of this work of the librarian, become a part of the regular school program. The children are enabled to use up-to-the-minute materials, recent newspaper clippings, illustrations and articles from current magazines, and find in consequence the outlook in school much resembling the spirit of these occasions outside of school.

2. It gives reality to school life.—The school library is an integral and necessary part of the school. The library and the school are as inseparable as the school and the classroom. In the real sense there can be no school today which has not functioning within it a well-equipped, well-administered library filled with active, busy children. I say "in the real sense," advisedly, and mean exactly that.

The school that has no library lacks reality. The children in it hear only echoes of reality—see only life's broken fragments. They do not live in such a school; they only bide the time until they can live. The deplorable part is that they may never live very completely unless they recover from the deadening effects of such a school.

Life is action, it is experience; it is more than either of these; it is action shot through with thought; it is experience glowing with imagination; it is moral and spiritual consciousness. School life—the life of vigorous childhood—is the growth of thought in action; it is the constant remaking of experience on higher levels of consciousness—physical, moral, and spiritual. The school is the place where children should grow to the best social advantage, because in the school conditions should be provided solely for this purpose. The library is one important means of making conditions right and proper in the school. Through it are supplied the material means of education—the materials of instruction. But the library is more than a means of education, it is an educative situation.

Because of his activities in the school and elsewhere, the child needs books. In his experiences at home, in school, and everywhere, he requires books. If he does not have access to properly selected collections of books as he needs them, his education becomes halting and unnatural.

The school library is not merely books; it is a place where growing children may find and read exactly the books they need—and under the most satisfying conditions. It is the one room or group of rooms in the school building where conditions may be made exactly representative of life outside of school. No other room in the school can be made so attractive and so satisfying to growing children in pursuit of their normal cultural interests and social responsibilities.

3. It meets the recreational requirements of growing children.—A bit of library history just here, taken from several years of experience which I have had in the Detroit schools, may help clear up an erroneous idea that has been one of the greatest obstacles in the way of adequate school-library development. When elementary-school libraries were first established in Detroit many teachers and principals regarded them merely as places for reference books. They objected seriously in some instances to children using the libraries for any form of recreational reading. Their whole conception of the school library was narrowed severely to its reference functions. Of course, this attitude, with few exceptions, is ancient history there now, but the shift in point of view came only after the fine social effects of recreational reading had been fully demonstrated. It was not until the libraries became places for recreational reading as well as for reference work that they proved themselves really indispensable and were recognized as such by the teachers and children and their parents.

The reference uses of the school library are tremendously important, but in some respects these uses can be met by crudely organized collections of books, however inadequate these may be. The fact that many teachers and school administrators think of the library purely from this standpoint accounts to considerable extent for the rather prevalent idea that a well-organized library, though desirable, is not indispensable in the school. The fallacy

here is that the reference uses of the school library represent only a small part of its real function.

The uses of the school library for recreational reading, for truant reading, or reading for appreciation and enjoyment, make it absolutely indispensable. No other school department can take over this important function of the library. No school subject can offer as much, even a fractional part as much, as the library in meeting the responsibility that rests upon the schools to train for a worthy use of leisure. This has been and still is the most neglected task of the schools. And yet no work that is done in the schools connects more directly with moral growth and with true happiness.

William H. Johnson, of the Chicago Normal College, writing in the *Chicago Schools Journal* for February on the subject of "Education for Leisure," points out the economic and social changes that have created the problem of education for leisure. Among these is automatic machinery which shortens the working day, giving more leisure time. Many young workers earn high wages and have much time and money for recreation. In every class of economic life today both adults and children have at their disposal more leisure time than they know how to use sanely. The schools have done their work so badly that leisure time is not only wastefully used but harmfully used by many persons.

Mr. Johnson points out that the cultural activities, music, art, literature, drama, should open the way to a wholesome use of leisure. He comments, however, that these are the most poorly taught of all school subjects in relation to the ends that they should serve.

"Reading," he states, "offers the most pleasurable and profitable of all means for the enjoyment of leisure time."

The conclusion is that children must be taught not only how to read but must be taught or trained to want to read.

Walter Pater in *Marius, the Epicurean* tells us that "education largely increases one's capacity for enjoyment." He comes even nearer to my conception of the school library as the one department of the school that furnishes the best opportunity for training for a worthy use of leisure, when, he says—in the same book

—"If our modern education . . . . really conveys to any of us that kind of idealizing power," that is, enjoyment, or worthy use of leisure, "it does so—oftenest by truant reading."

Entirely uncontrolled "truant reading" may be harmful, but under favorable conditions it enriches childhood and insures the proper growth of appreciation and the development of taste.

The school library furnishes the favorable conditions so greatly needed, with all of the freedom and lack of constraint that must go with truant reading, and with the development of literary taste and appreciation. The school library is made of book collections that contain no harmful reading, yet so carefully chosen with respect to the normal likes and dislikes of growing children as to satisfy their preferences for plot, action, adventure, or what not, so long as it is free from morbid or degenerating inclinations. The library from this standpoint is far afield from the strictly reference collections referred to a few moments ago.

Robert Louis Stevenson, judging from certain declarations in his "Gossip on Romance" would have placed in the library rousing good adventure stories as the kind that he liked best. "For my part," wrote Stevenson, "I liked a story to begin with an old wayside inn where, 'towards the close of the year 17—, several gentlemen in three-cocked hats were playing bowls.' A friend of mine preferred the Malabar coast in a storm, with a ship beating to windward, and a scowling fellow of Herculean proportions striding along the beach; he, to be sure, was a pirate. This was further afield than my home-keeping fancy loved to travel, and designed altogether for a larger canvas than the tales that I affected. Give me a highwayman and I was full to the brim; a Jacobite would do, but the highwayman was my favorite dish. I can still hear the merry clatter of the hoofs along the moonlit lane;—night and the coming of day are still related in my mind with the doings of John Rann or Jerry Abershaw; and the words 'post-chaise,' the 'great north road,' 'ostler,' and 'nag' still sound in my ears like poetry. One and all, at least, and each with his particular fancy, we read story-books in childhood, not for eloquence or character or thought, but for some quality of the brute incident."

Walter Pater, again in *Marius, the Epicurean,* tells us what ad-

venture is to the ordinary boyish taste—"the bear loose in the house at night, the wolves storming the farms in winter, the exploits of the robbers, their charming caves, the delightful thrill one had at the question—'don't you know that these roads are infested by robbers?' "

Reading done from this standpoint, truant reading, does three things specifically for the child; first, it establishes the habit of reading books as a source of recreation and enjoyment; second, it stimulates other appreciations and enjoyments; and third, it establishes the habit of reading books, of seeking books in the library.

Reading of Thoreau and Burroughs increases enjoyment of woods and country roads, and of wild animal and plant life. Reading the life of Edison or *How to Study Pictures* or *Stories of the Opera* gives greater appreciation of science, music, and art, and by so much adds to the enjoyment of life and to right living.

And don't fail to note the effect of regular library use upon the child's reading habits. The habit of seeking books and reading them when they are needed is fundamental to all learning processes. It is fundamental, too, in relation to work and to play whether in school or out. To seek habitually the right book at the right time is to bring into one's life the best that can be contributed to it from the past and the present—the best that can be predicted for it in the future.

This habit of using books from public, school, or personal libraries is, however, specific, and specific training is required for its functioning in one's life. Since it is true that the school is the only phase of social life in which the use of books is uniformly required of all normal individuals in the group, does it not seem a dull waste of opportunity not to organize this use of books on the library basis? We would give, thereby, all children in public schools equal opportunity in acquiring the library—the book-using habit; we would train them specifically in it. Children leaving schools in communities with good public-library facilities would continue the habit of reading. In other communities, their desire for books would create a demand for public libraries too insistent to be resisted.

The Library Is an Integral Part of the School Organization

Most of you nod assent to all of this because you have already accepted the school library as an ideal requirement of culture and education. The trouble is that you have associated this ideal with notions of luxury. You have not accepted it outright as a practical necessity. You have accepted it only theoretically. Practically you think that you can make shift without a school library—else why are there not more well-equipped, well-managed school libraries in the state of Ohio? Ohio, like many other states in the country, is neglectful of the reading interests of her school children.

1. It must be paid for as are other necessities in the school.—I am here to talk to you about the school library as a practical necessity, so vital, so indispensable, that money to pay for it must be had, just as money is had for school buildings and for teachers. The children cannot be well educated without school libraries. Therefore, you must have them.

You can't depend upon public libraries to supply school libraries, because in general rural and town communities in the United States are far worse off for public libraries than they are for schools. School libraries first, then public and community libraries—that is the order of development. To any one who cares to investigate the point closely, there is evidence to show that the number of public libraries in actual existence, ready to serve upward of a quarter of a million elementary and secondary schools in the United States is relatively insignificant. Public adult libraries can't, beyond certain exceptional cases, serve the schools—they must be served by the schools. Their arrested development must await the generation of taxpayers whose common-school education is based on intelligent library reading and study within the school building.

In providing our schools with libraries we not only meet demands of growing, thinking children, but we take thereby the most direct and economical course that can be followed in the development of more adequate public and community libraries.

Children who use libraries habitually in school will demand community libraries and pay for them as adult citizens.

2. The value of the school library has been fully demonstrated. —I find that the most convincing talk on libraries and the most constructive is that based upon real situations. Let me talk with you briefly about a few of the Detroit school libraries with which I have worked for several years. In order to present to you some of the least expensive libraries, recently established, with small but well-balanced book collections, I am confining these comments to the elementary-school library. There were about sixty of these in the Detroit schools, well equipped, and in charge of trained librarians.

What is said about these elementary-school libraries, however, applies with equal force to secondary-school libraries. The differences between the two lie mainly in the titles of books selected for each, in the maturity of reading tastes and interests, or in the ultimate size of the book collections after many years. In the large high-school library the collection of books after eight or ten years should aggregate twelve to fourteen thousand volumes, as compared to four or five thousand volumes in the elementary-school library.

Beginnings may be made equally satisfactorily in both types of library on substantially the same initial costs. We may make a modest beginning for either a high-school library or an elementary-school library with a collection of 220 books costing approximately $400.00. I mean that for this amount of money we may buy a very well-balanced set of reference or other special books for the new school library. Of course, books of fiction, poetry, and necessary standard literature, in abundance, will have to be added later, from year to year. Supplies may be bought for $100.00 and furniture for $300.00. I am saying simply that practical, well-balanced library equipment in schools may be secured on a comparatively small initial investment.

The following comments on Detroit elementary-school libraries will give you a vivid conception of the part these libraries play in the educational life of the children. From a little bulletin published by the Department of School Libraries, I take these notes:

HEIDI'S PROGRESS

The following, as reported from Columbian School, is typical of the circulation of favorite books found in the school libraries:

"Mary read *Heidi.* She recommended it to my cousin. My cousin told me about it. I read it and recommended it to Margaret. Margaret moved to Port Huron before she finished it, so she asked for it as a birthday gift. After Margaret finished it, she loaned it to the little girl next door."

PUBLIC-LIBRARY CARDS

"Many libraries have recently had campaigns for public-library cards. At the Stephens School a survey was made, and out of an enrollment of 937 pupils, 447 had library cards. Increased circulation to Stephens School children is reported by the public library, and a new survey will be made at the close of the campaign."

LOOKING BACKWARDS

These figures of the monthly circulation for Columbian School are interesting. They circulated 295 volumes in November, 1922; 605 volumes in November, 1923; and 846 volumes in November, 1924.

THE RADIO FAN

A new motive for map study is provided by the radio. A boy at the Morse School who picked up Hastings, Nebraska, on his radio could not rest until he had looked it up in the library.

THE LIBRARY IN PRINT

In the *Franklin News,* the paper of the Franklin School, for November, appear three library articles, one entitled "Why I Should Read Biography," one, a notice of Book Week, and the third, a notice of the contests for public-library cards and public-library visits.

CHILDREN TEACH USE OF DICTIONARY

At the Doty School eight "captains," one from each table, were given a lesson on the parts of the dictionary and how to use them, by the librarian. Each "captain" then prepared a lesson for each person at his table, gave the lesson, graded the pupils, and reported the results. The work will later be checked by a general test given by the librarian.

BOOK NOTES

Notes on books read were written originally by members of the fifth- and sixth-grade literature classes at the Doty School. Later they were placed on a library shelf in a box. Extra slips were placed by the box, and children are free to add notes on books they like. The children use these freely—both to consult and to add to the list.

3. The work of the school librarian is definitely constructive and far reaching.—If I had the time I could give you more of this delightful library lore, for these schools are rich in it. The voice of the children in praise of their libraries is irresistible. This is

like saying that the library acclaims itself, once it is established. But it is usually very difficult for the teacher or the school administrator, living in a school without a library, to visualize what one is like. As a rule they will admit its importance in more or less vague terms, but when it comes to saying what the library service is, and securing it in terms of salary and other necessary funds, they find this quite a difficult matter. To answer from the shoulder the board of education's question, or the taxpayers' question, "What does this school librarian do?" is baffling.

"She hands out books to the children." Well, yes. "She checks up books as they are returned. She buys books." No board of education that I know of would employ a school librarian on such replies as these. In surmounting this hazard in my own efforts to secure school libraries where they were needed, I went directly into several successful elementary-school libraries and observed carefully the tasks that kept the librarian busy. These records, however, only half answered the question. For these records had been based on observations when groups of children were assigned in the room. On this basis the school principal was willing to grant the librarian time to serve the children but did not see that she needed time, like the banker, to arrange in advance to serve her patrons effectively. Consequently, I had to go back for more extended observations, this time to show what the librarian actually does to keep her materials in order and ready to use.

The following list of activities, those during regular periods for visitors and classes, and those when scheduled classes or groups are not present, is an answer to the question, "What does the school librarian do to earn her salary?"

During Regular Periods for Visitors and Classes

Charging and discharging books.
Replacing materials where they belong on tables and shelves.
Instructing children in the use of the library catalogue or other points required in the course of study.
Giving lessons in the use of the encyclopedia.
Giving lessons in the use of the dictionary.
Giving class instruction in the care of books.

Directing children in playing instructional games such as "hunting books," "replacing books," or "alphabet games."
Preparing for visits to public library or branch.
Conducting visits to public library or branch.
Training the children how to enter and leave the reading room.
Training the children to return to the proper places materials that have been borrowed.
Giving incidental instructions in the use of books and library materials.
Telling stories to pupils below grade III, or above grade III.
Reading aloud to pupils below grade III, or above grade III.
Standing to assist children as they enter the room at the beginning of the period.
Walking around the room, alert to the needs of the pupils.
Taking attendance.
Settling disputes over coveted books, or chairs.
Calling the children's attention to ways in which the library may serve them in different classes.
Maintaining order during reading periods.
Assisting pupils who need help in finding necessary reading materials.
Checking bad habits in the handling of books.
Instructing children how to read, how to skim, how to take notes, how to use the table of contents, and book indexes.
Having children read aloud short selections to check their comprehension.
Reading bits aloud to encourage slow readers.
Helping children from supervised classes to find material.
Helping children in the preparation of notebook assignments, such as looking up current events.
Directing the choice of books for readers who need guidance and attention.
Making friends with the children in order to attract them to the library.
Distributing reading lists.

DURING PERIODS WHEN SCHEDULED CLASSES OR GROUPS ARE NOT PRESENT

Conferring with teachers concerning topics to be studied in the near future.
Analyzing the interests and needs of the school children with a view to meeting these through library materials.
Visiting classes in order to become acquainted with classroom interests of the children.
Training pupil helpers or library pages.
Visiting the public library occasionally to study materials there from the point of view of needs of the school with a view to asking for loans.
Visiting the public library for supplementary materials.
Attending teachers' meetings.
Attending committee meetings.
Visiting the art museum in search of materials.
Telephoning for materials from local sources.

Assisting teachers who come to the library in search of materials.
Making analytics.
Posting statistics on reading.
Making out circulation reports.
Preparing new books for use.
Searching among library books for material relating to work in progress in various classes.
Securing pictures for borrowers.
Organizing material—books, magazines, and pictures.
Checking current events from periodicals to interest pupils or teachers.
Reading over material to judge its suitability for work in a given grade.
Checking up books received from the public library.
Calling on local museum periodically for needed exhibit material.
Checking books to be returned by parcel post to the public library.
Wrapping up materials for parcel post.
Preparing attractive signs and notices for shelves, tables, or bulletin boards.
Marking in newspapers and magazines pictures or articles for children to cut out.
Clipping book jackets or other illustrations to post on bulletin boards or to place among the books on shelves.
Mounting pictures.
Preparing pictures for scrapbooks.
Making scrapbooks.
Preparing materials for teachers' meetings.
Arranging materials for special club programs.
Reorganizing the posters and exhibits on bulletin boards each week or oftener.
Preparing and setting up exhibits at the request of various school departments.
Arranging tables and chairs.
Placing books on reserve in response to special requests from teachers.
Preparing materials for special days.

DISCUSSION

Mr. W. H. Richardson: The presence of so few to represent the library work of the thousands or more high schools of Ohio is both discouraging and encouraging—discouraging because a work so important has as yet so little recognition; encouraging because this gathering indicates a growing interest in one of the agencies which I consider essential to the highest grade of high-school work.

As Mr. Certain said, it is not a matter of money, but a matter of lack of interest and realization of the great benefit of a library,

not only to the school work but to the general education of the student body, that prevents adequate support for libraries. When school authorities can be made to understand the importance of libraries, there will be little difficulty in securing adequate library facilities.

Some traditions must be broken down before the library can be made to function to the greatest extent in school work. The traditional school is not conducted in such a manner that the library can be used to any great extent. There must be a breaking away from teachers' traditions to methods of instruction that will make the use of books and printed matter a considerable part of the pupils' work. On the other hand, there are library traditions that are just as unfortunate and the traditional library methods must be modernized in order to secure proper functioning with the schools. Happily, both conditions are being corrected, not as rapidly as we would wish, but I am certain that no one movement in school work has gone faster or farther in the last five years than the library movement.

The business of the library and the teacher is to bring the pupil in contact with the written messages collected in the library. I predict that in a few years the present study halls of high schools will be changed into libraries with adequate library equipment and books, while the traditional furniture will be junked or used somewhere else.

All high-school buildings should have one-sixth of their capacity devoted to library facilities and one-sixth of the school should be in the library consecutively all day. The results in the adult life and interests of pupils so trained will be an unconscious feeling of necessity for books and reading, with a training that will enable them to use printed matter not only for vocational but for avocational purposes.

The situation as I see it, is that school administrators, principals, and teachers must be brought to a realization of the advantages of the library in education, and it is the business of us who believe in the movement to promote it, in season and out of season, and in every way that we can, feeling that in so doing, we are rendering a service not only to the pupils but to the future communities of our state.

SPECIAL EDUCATION

E. A. Doll, *Ohio State University,* Presiding

THE WIDER MEANING OF SPECIAL EDUCATION

Henry H. Goddard
Ohio State University

A convenient and often impressive manner of starting an address of this kind is to say: "Webster defines special education as—" and so forth. But in this case Webster does not define it nor have I been able to find any book that does. Even Monroe's *Cyclopedia of Education* has no such topic. There are special classes, special schools, special teachers, but nothing of special education. My search, however, was not entirely without result, for I find the following under the head of "Education for Efficiency," which I take to be a very good definition of special education. "The training of every citizen, individually and socially, in such a way as to obtain the greatest measure of fitness for life in each member of a group or a society as well as in such a society as a whole." William H. Maxwell in 1905 said, "Education for efficiency means all of these things but it means much more; it means that each student shall be taught to use his hands definitely, to observe accurately, to reason justly, to express himself clearly, that he shall learn to cooperate with his fellows for far-reaching and far-distant ends."

The term special class in its narrowest sense refers specifically to public day-school classes for subnormal children. These two extremes indicate the range of the concept of special education. In the narrowest sense, the idea is more than thirty years old, for in 1893 a special class for subnormal children was started in Providence, Rhode Island. The broader concept of special education has hardly become conscious in the mind of the average educator, but intermediate steps in special instruction are found in many places. In adopting as our definition of special education, the dictionary definition of education for efficiency, we are not

unmindful of the humor of the situation. When we read as above quoted that "education for efficiency is the training of every citizen, individually and socially, in such a way as to obtain the greatest measure of fitness for life," and so forth, one immediately wonders how that differs from a good definition of education. It is like the grocer's classification of eggs into "strictly fresh eggs," "fresh eggs," and "eggs." So it seems we have education, and education for efficiency, and according to Maxwell, something more than that.

One might also if there were time, dwell upon the difference between special education and the education of special people. In the former sense, we have had physical education, art education, and so on through a long list, but we have pretty generally insisted that these should be supplementary to, and not substitutes for, general education. In the second sense, the education of special people, we have had the education of the blind, the deaf, and so on, where our purpose has been to give a general education, but because of the peculiar condition of the people educated, we have recognized the necessity of adopting special methods. According to our conception, however, the result was to be the same or as nearly so as possible. In the broader meaning of special education, we include not only the special types before mentioned but what we might call mixed types with all possible variations in the mixture. That is to say, we have the special education of special children. Furthermore, we recognize that the ideal attitude is that every child is a special case and requires and should have a special method if we are to retain and not destroy his individuality. Having thus indicated what we conceive to be the broader meaning of special education, we may now proceed to consider the steps by which this concept has been reached. We shall begin with the feeble-minded in the public schools. It is true that special education began with the deaf and the blind and the idiot, but inasmuch as those were institution cases and were not thought of originally as part of the public-school work, we set them aside as belonging to another chapter. The special class for the dull, or backward, or feeble-minded

pupil in the public school is the real beginning of specialization in our general educational system, and as such will prove instructive in our discussion.

The two lines of special education today are the education of the dull child and the education of the bright child. The one is an established procedure, the other just beginning. We have learned many things from the feeble-minded, and many things in our public school today have been taken over bodily from practices in the institutions for the feeble-minded. We failed to realize, however, the difference between the dull child and the normal, and, consequently, we have attempted to solve the problem by gradual concessions from our method with normal children. For example, the first thing we did was to attempt to teach them the same things, allowing a longer time for accomplishment. When we found we could not do that, we put in a little manual training, and gradually more and more, until today we have gone no farther in most cases than to allow them a half-day of manual training and a half-day of academic work. This process must continue until we discover that academic subjects are of little or no value to these children and their entire time should be devoted to manual and industrial training to fit them for what they are going to do in life. The problem now is, Can we learn from this experience and not make the same mistake in our attempt to educate the supernormal child? Shall we realize that this is another problem, and go at it in another way, or are we going to make little concessions from our procedure with the average child and so take years to arrive at a rational treatment of the gifted child? The education of the gifted child in special classes is a new problem and must be solved in a new way. When we have solved the problem of the bright child and the dull child, we will discover that there are still other groups that require special treatment. What we now call the normal or average group will be discovered to be made up of smaller groups, each requiring some special attention. In this way, we shall be able to obtain the greatest measure of fitness for life. Educators already recognize this, and in the near future special education will become the theme of our educational conferences.

CORRELATING THE SPECIAL CLASS WITH THE COMMUNITY

Meta L. Anderson
Director of Special Classes, Newark, New Jersey

Several years ago, in an orphanage in Serbia, there was a little gypsy boy. No one knew how old he was, nor where his parents were. He had been picked up by the French troops and used as a mascot, and so had learned to speak French after a fashion. Because he could speak French, I was able to use him as an interpreter when I was with the other children, for poor as my French might be, it was better than my Serbian.

Someone conceived the idea of a military organization for the children in the orphanage, with generals, colonels, and majors, and Stoyan immediately applied to be made a "little colonel." When this application was not approved, he jumped on a table and made a speech in his own behalf. Among other things he said, "We are gypsies, but we are *people*."

It seems to me it is important for us to remember, whether the feeble-minded are in school or in the community, that they are people. They may be good or bad, healthy or unhealthy. They are born, they go to school, leave school, go to work; they marry, have children, keep house, support families. They vote and get elected to office. In fact they succeed or fail on their level much as other people succeed or fail on theirs.

The feeble-minded are trained to do their part in the community, to make their contribution to the welfare of the country, through practically the same agencies by which normal people are trained—the home, the school, and the church.

Our emphasis is on the school training, although we do as much as possible to influence the home training. The church training we dare not touch at all.

The standard we have set for ourselves in the Binet Schools and Classes of Newark is that we shall consider the pupils' success, our success, and their failure, our failure.

We have no official follow-up workers in connection with the

Binet Schools. Each Binet School, however, assumes responsibility to keep informed in so far as possible, in regard to the way Binet pupils get on in the community. When we attempt to classify the children who have left the Binet schools as successes, failures, or partial successes, we meet many difficulties. We often do not know just what to consider as success or failure.

I recall two brothers who came to us a dozen years ago, and stayed with us two years before they were old enough to go to work. They lived in a miserable tenement. When the teachers called at their home, they usually found the mother on the floor under the influence of liquor. The boys spent their free time in the back rooms of disreputable barber shops and saloons. They were high grade and their chief ambition was to get money without working. When they left our school they had grown to like the things the school offered and to dislike the amusements of the barber shop and the saloon. These boys were clean, up-standing fellows. They both became barbers and were soon successful because, as they expressed it, they had the cleanest barber shop in the neighborhood. One of the brothers is now employed in the beauty parlor of a high-class department store and the other is a successful barber. Each earns fifty dollars a week, works steadily, and the married one seems to take good care of his family. These two we consider successful.

Another boy comes to my mind who was considered too vicious to attend any school. For some reason, which I do not recall, we insisted upon his right to school training. When Mike knew the teachers were to call at his home, he would hurry home to scrub the stairs of the house which led to his flat and the floors of his home. At Thanksgiving time he made his mother put a white rag on the table "like school," meaning a table cloth. When Mike left school he worked in an ammunition factory during the war and then went to work in a wholesale butcher shop where he actually enjoyed the handling of the heavy carcasses because of his great strength. He earns considerable money, works steadily, and contributes to the support of his family. This boy we consider a success.

One of the girls came back to see us the other day with her

two children. She was well dressed and the children were clean and apparently well cared for. She came to tell us she was moving to another neighbhood because she wished to bring her children up in better surroundings.

There are numbers of cases like these, of defective boys who are working steadily, earning enough money to support themselves and to contribute to the support of their families, and of defective girls who as wives and mothers are far better than their own mothers have been. These successful boys and girls from the special schools have unquestionably raised the standard of living in their own families and in their own neighborhood.

Some years ago a mother objected seriously to sending her girl to us to be trained because she feared that no one would want to marry her if she attended a Binet School. When the girl left school to go to work not long ago, the mother came to us with deep gratitude and said, "You took my worst and have made her my best." The Binet Schools have been established long enough now for the workers to know their neighborhoods pretty well. We frequently have several children from the same family attending the special school. In every case we expect to train those children to be the mainstays of their families. "You took my worst and have made her my best," is a description of a state of affairs by no means uncommon.

Let us take some cases on the other side of the ledger. Tom is an Italian boy who came to the Binet School some years ago. He was high grade and very difficult. We were, however, quite satisfied with him when he left school, because he was a clean, self-respecting boy who was willing and eager to work. Tom went to work for his father who was and is, a prominent bootlegger and drug vender. The family owns grape ranches in California, and the men folk of the family go back and forth across the country a dozen times a year. These people have a great deal of money and political influence. One of their boys, who as far as I know has never been diagnosed as feeble-minded, has recently killed a companion and is now on trial for murder. They expect to get him paroled through their influence. Another

boy has been attending the Binet School. He is also high grade and very difficult, and his case is complicated, because he is involved with gangs outside of school. We, therefore, decided that a period away from the city was what the boy needed most, and we proceeded to put the necessary machinery in motion. In spite of the three lawyers constantly employed by that family, in spite of their money, in spite of their political influence, but with the backing of Tom, the trained member of the family that we sent out, the boy is now in a reform school for a year. When he returns to us, we hope to make him into at least as creditable a member of society as Tom.

Tom is certainly competing on equal terms with his fellows in the community where he was born and raised. Because of his money and influence he has the respect of the Italian group of citizens. He is well dressed, well mannered, and very kind-hearted. Whether Tom is considered a success or failure seems to be a matter of a point of view.

There is Paul, a colored boy who had periodical attacks of stealing everything in and out of sight. During the school period these attacks were understood and taken care of, but during the summer vacation Paul fell into the hands of the law and was sent to the reform school for boys. There he became a leader of the religious activities of the colored boys and a decided asset to the institution. Later he was paroled and got a position as bellboy at a leading hotel. I fear the result was just what might have been expected and Paul is now back at the reform school and again a leader of the religious activities. Paul is a success in the institution and a failure in the community.

A little girl left us to go to work to help support her mother as many of the other little girls have done. The mother became ambitious for her daughter and wanted her to get more of an education, so she sent her to night school. The result of this higher education was an illegitimate baby. The girl is, however, supporting the baby and also helping to take care of her mother.

To a list of this sort of failures I could add a number of cases of children trained in the Binet Schools who as automobile drivers have been repeatedly arrested for speeding; who as sellers

of coal, ice cream, and other things have been arrested for giving short weight; who as workers in various occupations have been quarrelsome and have drawn knives and so have been arrested for felonious assault. As far as our records show we have had but one arrested for murder, an epileptic who threw a boy that had been teasing him before a coming trolley.

It is not our desire to ask for sympathy because of these failures from our special schools, nor yet to ask the public to excuse us for them. It does seem to us sometimes that an account of our failures does not differ so greatly from the account of failures of the graded schools. We believe so thoroughly in the training we are giving in the Binet Schools that we feel strongly that many of the failures of the graded schools might have been turned into successes if they had been trained in our schools. Of this we are confident, that the children who have left us to become successful, would have been far less successful, perhaps failures, if they had not been trained in the special schools, and the children who have left us to become failures would have failed to a far greater degree without that training.

In our survey of the feeble-minded families whose children are in training in the special schools, the outstanding fact that impressed us was that the second generation of feeble-minded which is trained, is much more self-supporting and self-respecting than the earlier untrained generation; and there are comparatively few cases of the trained defectives dependent on the charity organizations.

There is a distressing section in Newark where there are many ill-cared-for children. The men have work to do, but they prefer to drink and gamble. The women know nothing of housekeeping or of caring for children. We are very eager to do something to improve the neighborhood and the means we shall use to accomplish that purpose will be the Binet Class in the school in that neighborhood. It will function to such a degree that the children trained there will be able to influence for the better the homes from which they come, and through these homes to influence other homes.

The aim of our work is to train the defective children in better

working and better living in the community where they will have to work and live. To do this we must know something of what they will need in their work and in their lives. We find that defective persons fail to keep a job not always because they cannot do the work, but often because they won't work. We find that they lose their jobs because they cannot get on with other workers, because they cannot mind their own business, because they cannot get to work on time, or because they stay home from work at the slightest pretext. We find that they get into trouble because they do not know how to use their free time. If these are the things they need to know, then these are the things we need to teach. This brings us to the curriculum of the special schools.

When we began our work for the defectives in Newark fifteen years ago, we had no desire or thought of introducing into the special schools the curriculum of the traditional school which according to all reports had completely failed as a means of training the feeble-minded. Even then we believed that we had left behind the teachers and principals who said "You may go out to swim, but don't go near the water," or "These children cannot play until they have learned to play." We, therefore, have organized kitchens in our Binet Schools where our children learn to cook, wash and iron, and clean house. Every child has his luncheon cooked and served by the pupils of the cooking classes. Every girl and most of the boys have their opportunity for training in the kitchen. We have organized gymnasiums in the schools where the pupils learn to control their bodies and where they learn the homely virtues of fair play and getting on with one another. We have sewing classes where the girls learn sewing and garment construction. In these classes the girls make their kitchen aprons and caps, their middies and bloomers, their underwear and summer dresses, and many things besides. We have industrial rooms and wood-working shops where the children gain skill in handling materials and tools, and self-respect because of tasks well done. We have bathrooms in the schools that the children may not merely be told to be clean, but

where they may be taught to be clean. We have classrooms where the children receive instruction in the academic subjects to the limit of their ability.

It is with this curriculum that we are teaching the children, not only to be willing to go into the work they can do, but to want to work. It is with this curriculum that we are teaching the children to stick at a job until it is finished, to get on with their fellows, and to mind their own business. It is with this sort of curriculum that we are forming habits of punctuality and regularity.

Such a curriculum would count for little were it not for the inspiration of the teachers who are using it as a means of training children. Their personalities and their extra activities undoubtedly count for more than the actual subjects taught, but because we cannot adequately describe these elusive influences, we must be content merely to describe the curriculum.

We have been somewhat disturbed this year to learn that teachers and directors of special classes in neighboring cities have reduced the time given to activities in the special classes and have emphasized the academic subjects in the training of feeble-minded children. It is difficult for me to speak composedly on this subject and perhaps I ought not to talk about it at all, because it is so impossible for me to understand the traditional attitude of the teachers who are content to take credit for those children who leave our schools and succeed in spite of us, and are content merely to make excuses for those children who fail because of us.

Beside those who are openly advocating the education of the feeble-minded along academic lines, there are those who believe as we do that it is more important to teach a sixteen-year-old defective child to go out and take his place creditably in the community, than to spend from two to twelve years teaching him to read in a second reader. We find that many of those who agree with us are what the world calls cautious. They are not sure that it is wise to go against public opinion; in fact they are so afraid of the consequences of what they do, that they do nothing.

I come to you, then, not merely to tell you of what we are

doing in Newark for the defective children enrolled in the Binet Schools, because we do not believe that we are doing all that can be done, nor do we believe our curriculum is the last word in training defectives. I come to ask your support for the kind of training that will really train these children in working and living. Whatever our faults, we are sincerely seeking the truth for this department of education.

COMBATING DELINQUENCY AMONG SCHOOL CHILDREN

CALVIN DERRICK
New Jersey State Prison, Trenton

The subject assigned to me for this hour is not a new one. Indeed, it has been a rather popular subject for many generations. The conduct of children the world over is always more or less the despair of their elders, who never fail to discover in the children a deplorable lack of respect for themselves, a tendency toward bad conduct, and a careless attitude toward their own future. I suppose this attitude of mind is akin to that which usually develops in middle and later life in most of us, who, while appreciating all the advantages of a steadily advancing civilization, nevertheless look back rather longingly on the good old days of our childhood, when, it seems to us, education and training were a little more wholesome and standards were a little more secure. It is no idle jest that the youngsters of today talk about our old-fashioned ideas and notions and speculate as to what the world of childhood must have been like a generation ago when we were children. To present-day children, our critics, it would indeed seem like a pretty small world if it were stripped of its radios, automobiles, aeroplanes, moving pictures, phonographs, player pianos, electricity, telephones, and innumerable other devices, contrivances, and inventions which go to make up the commonplace advantages of child life today.

It is rather a delightful thing that we adults are given to remember so few of the really disagreeable things about the past, and especially about our childhood past, and remember only those

wholesome and delightful experiences which, as time goes on, are sure to be surrounded in our memory with a sort of rose-tinted halo. If you will pardon a personal allusion, I will confess how much joy and righteous satisfaction, amounting almost to a feeling of superiority, I can get out of reviewing some factors and experiences of my own early training. I recall that I have spent many days in raking and binding by hand the grain thrown from the old-fashioned hand-cradle method of harvesting. I have spent many days thrashing out grain with a flail and winnowing it by a hand-turned windmill. Many another pioneer method of work have I experienced. Looking back upon those days now, it seems to me that I was very happy and very fortunate, and that, as compared with my experience, the boys of today are poverty stricken. But as a matter of real fact, I know that the boy of today has thousands of advantages, the most important kinds of advantages, that it was never my good fortune, as a boy, to encounter.

We know that the present generation has no copyright on pure deviltry. The boys and girls of one hundred or fifty years ago were just as fun-loving, just as adventurous, and just as much the concern and despair of their teachers and parents. Of course, we are well aware that the literature regarding children and schools of the past is replete with the pranks of the school boys and college students of that day. The property destroyed, the windows broken, the orchards robbed, the horses and cattle turned out of pasture, or driven off, made their respective owners just as angry and just as much concerned about the future welfare of the republic because of the total lack of proper home training of the children and their incorrigible attitude toward their elders.

Nevertheless, despite all the foregoing, we have to admit that the character of the pranks, the type of delinquency displayed by the children of the past was more harmless, more mischievous, less utterly degenerate and disregardful of property rights, than is evidenced by the children of today. It is true that the amount and type of delinquency displayed by children of school age today are serious.

Let us briefly review the social conditions in order that we

may better understand the influences outside the school which we are trying to combat. We need to go back only to 1914 when things were more or less on "keel" the world over and the social and industrial conditions were somewhat stable and fixed. We can all recall, each one filling the details from his own fancy, the tremendous upheaval which took place throughout the world with the outbreak of the war, and how it has affected our own lives since 1917. Industry was overturned. The government stepped in and commandeered great manufacturing plants and great corporations. The President called the most outstanding leaders in American life from the fields of finance, manufacture, letters, law, and commerce to devote their time, at the rate of a dollar a year, to the cause of helping America win the war. Millions of men between the ages of eighteen and thirty-two went into uniform and crossed the ocean. Thousands upon thousands of teachers, nurses, laywomen, and college girls left their usual walks of life and went abroad to work for the cause. Thousands of other girls went into factories to work. The youth, both boys and girls, in great numbers left the farm, going into manufacturing industries of various kinds. In fact, young children twelve and thirteen years of age, were drawing more money per day than their fathers could earn before the war. There was a sort of frenzy throughout the population in the matter of getting things done. This, fortunately, at the time was taking a wholesome, almost a holy trend. It was the fervor of patriotism that put the drive into business, into the building of ships, the building of camps for soldiers, the selling of Liberty Bonds, and the raising of money to pay for them. Farmers' wives and daughters went into the fields to work in order to release male help for industry and arms. Nothing in the way of sacrifice was considered too great. All such activity was a privilege. I need not recite these events; they are fresh in your minds. But they are tremendously important factors in our present difficulty. Who of us can ever forget Armistice Day in 1918? Who of us can ever forget the orgies of spending at that time? Everybody had money and was liberally spending it. Common laborers were earning ten and twelve dollars a day with several members of the family working

and all drawing liberal salaries; people almost went mad! And then there began the cancellation of war contracts, the closing down of war industries, the breaking up of war units, the disbanding of war organizations, the gradual return of the soldiers, the creeping on of financial and industrial depression, and the days of readjustment and reconstruction were upon us. The Volstead Act was passed. Hundreds of thousands of soldiers, many of them from the rural sections, had no desire to return to their homes. They had been heroes too long. They lingered in the cities. They clung to the uniform. They were not eager for the complete disillusionment which return to citizen clothes and prosaic occupation forecast. Crimes began to increase. Within a few months we had what was popularly known as a "crime wave." Our prisons and reformatories were filled up, not with old criminals but with young ones; not with men who had been reared in poverty and delinquency, but with men who had had honorable careers until this time and were now unwilling or unable to catch the old stride. Many of them were shell-shocked; many shattered nervously. The efforts that had been put forth throughout the country by the government and by all agencies and individuals, to make our boys "over there" forget, and to fill their idle hours with cheer, cannot be ignored. We sent, literally, shiploads of cigarettes. We placed the stamp of approval and legality upon cigarette smoking. We admitted that the girls in Red Cross work or other branches of the service up along the front lines, or anywhere in the rear of them, were entitled to cigarettes and in need of stimulation. We put on every conceivable kind of moving picture, every conceivable kind of entertainment other than moving pictures. And the pageantry in all the cities, which was enacted by the leaving and returning units of the army, the great parades, the wonderful banners, the display of flowers, the military bands, the glittering guns, and natty uniforms—why, it thrills us yet today to think of it. Is it any wonder that the children should become innoculated by this excitement; that they should absorb much from this condition and add vastly, through their imagination and their own initiative, to the stimuli which they were receiving? The home broke down; the church broke down;

children were out of hand. That is the problem. That is why we are combating delinquency in the school today. Some of the very best strains in the population brag over their success in breaking the law and defying enforcement. Some of our very best families think it smart when the young people of the family, maybe still in their teens, talk glibly about their bootleggers. Thousands of girls and boys from thoroughly respectable stock are carrying both liquor and cigarettes, and in some cases adding drugs, because it is smart. The home knows this. The church knows it. The school knows it. But we all seem to be helpless in the face of it.

An estimate was given in the International Drug Traffic Conference recently held in Geneva, that more than fifty thousand fresh addicts to the heroin habit were added to the list of the United States last year among school children, and that in many cases children as young as twelve years had been found to be addicts.

But we must not ignore the other side of the question. Certainly the churches are trying hard to redeem themselves and probably never before has there been such a constructive and determined effort put forth by the united church to serve humanity. The Y. M. C. A., the Y. W. C. A., the Y. M. H. A., the Knights of Columbus, all of these are carrying on a wonderful campaign of reconstruction and they are succeeding. Such organizations as the Rotary, Kiwanis, and practically all other big business-men's organizations are taking active part in the spare-time activities of boys and girls. Surely there never has been a time when Parent-Teacher Associations and the active teaching forces were working more closely together. The schools themselves try to meet the problem. A great deal of time, thought, and money is given to athletics, a special course in manual training and manual arts; special-class work, visiting-teachers' work are all emphasized. Boards of education try to help by furnishing school clinics. The oculist, the psychiatrist, the psychologist, all enter into the program. What is the trouble? Why can we not understand the problem? Why is delinquency on the increase?

In my opinion, it is not because there is a lack of effort. It is

not because there is a complete lack of understanding of the problem. But it is rather because there are great areas in the problem which no organization is touching.

In the first place, the moving picture is one of the most potent factors. The moving picture is attended by every child, often many times a week. The children see but little that is really good and helpful for them. They see a tremendous amount of trash that is very harmful to them. Let me illustrate. In the town where I live, and in the community where I reside, there is a little theater. It is rarely attended by any one in the town outside of that immediate community. It is in the residential end of the city and is supposed to be rather a good section. Every Friday afternoon at four o'clock the management puts on a matinee. Only school children are supposed to attend this matinee for the admission is reduced to ten cents. A short time since I was passing this place on a Friday afternoon and took pains to note the picture that was being given. The title was *Unmarried Wives*. You see this represents a complete lack of consideration both on the part of the parents and on the part of the management. Parents simply gave the children ten cents to attend the theater. They would go to school, from the school to the theater, and from the theater come home for supper. That is as far as the parents' concern seems to go.

We have had in Jamesburg hundreds of boys since 1918 who have committed most desperate delinquency as the direct result of instruction in crime and violence from the screen; and there is nothing to counteract it. We cannot substitute anything for it. The only thing that is left to do is to correct it.

The question of the radio results in much the same discussion and conclusion as do the pictures. It is good, it is bad, and it is indifferent. But it is here and a vital factor.

The automobile owned by almost every family means that Sunday will be spent away from home. Churches are so certain of this that many of them take a two-months' vacation in the summer. Practically all of them take one month.

But I would not be guilty of allowing myself to become a pessimist. I'm an optimist! For twenty years I've been working

with delinquents, both children and parents. It is my fond hope that I may some day be in charge of a reformatory for delinquent parents. I will make some of them "step." But in the meantime I do not forget that in all my experience I have had occasion to handle but few boys or girls from good middle-class homes, established by reasonably good parents of reasonably good stock, and in those relatively few cases the boys or girls have usually straightened out beautifully. That is not saying that the children of such homes are not too often serious delinquents and very difficult problems in school. They are. Usually, however, these cases may be reached and corrected through the proper cooperation of the home and the school. The juvenile court and the institutions are rarely necessary, while too great haste in rushing these children into the court, and probation, often delays the cure and disgraces the culprit and the family. On the other hand it is equally foolish to waste teachers' time and energy in attempting to correct and adjust children who can be helped in no other way than in the proper institution. The real question then is: "How shall we know where and upon whom to put our effort in the school population?" To answer this question we must briefly analyze the school's problem. Schools are too large—often several thousand pupils in one school. Classes are too large—fifty, seventy, or one hundred pupils for one teacher. Many pupils are on part time and have too much spare time without any supervision or responsibility. This is particularly bad for those children whose parents both work away from home. The very generosity of the public in its desire to aid children by establishing school clinics, day nurseries, cheap meals, and free books, aggravates the problem by freeing parents of much responsibility. Too many parents are anxious to let the court and probation officer assume the burden of control and discipline and are indeed more than willing to let the children go to an institution until they are old enough to get working papers. We do too much for the good of the parents.

In the next place the courses of study are too inelastic and too monotonous, and finally, teachers do not know very much about children!

I can almost feel the wave of resentment sweeping up toward

me for that last statement. But it is true. Oh, of course, you know a lot about some children—you understand them perfectly; that is why they give you little or no trouble; but those above and below the dead-level line you know little about and can render but little aid.

The real answer to the problem must be found in more schools; enough to take care of all the children in much smaller classes of twenty to thirty pupils; with more elasticity in the courses of study, especially in the manual-training and manual-education courses. It should be possible for teachers to use manual education for exploratory purposes, to aid in determining how best to guide the manual-minded child, and in giving opportunity to substitute liberally the requirements of manual education for those in the verbal or academic educational requirements.

There must be some adjustment of the compulsory-education law that will permit a more intelligent application of its provisions to those children who have reached their mental level educationally two, three, or four years before they have reached the chronological school age under the compulsory-attendance law.

There must be a much better understanding between teachers and parents regarding the spare-time activities of the children. It is not sufficient that the Parent-Teacher Associations, theoretically, and by program, seem to be whole-heartedly cooperative. This, too often, is an intellectual cooperation which has no effect whatever on the idle time of the child. Every large school center should work out a very definite plan of student control which will permit large numbers of boys and girls to take active part and to bear active responsibility in the control of the masses of school children. Such an organization easily results in making the more responsible leaders look after the more careless and impulsive children in their immediate vicinity. The expansion of the activities of the Boy Scouts to assistant traffic policemen, and for other community activities, may well be copied and expanded by school authorities in their effort to control the spare-time activities of school children.

But probably the most important single step to be taken is the universal classification of school children. The tragedy of child-

hood is not being understood until either some great catastrophe occurs or the child reaches an age which precludes taking advantage of certain opportunities. The child with a manual type of intelligence may succeed in keeping abreast through the first, second, or even the third grade. Even if the child is a little slow or dull, the busy teacher does not stop to analyze the cause very closely, but spurs him on and succeeds in keeping him at the tail end of the class. The child may fail the first time in the third grade and be required to take it over, finally succeeding in getting into the fourth grade where his handicaps become more apparent. He may now be dropped into a special class or a special section of the regular class. If he gets to the special class and receives special study, his type of intelligence is discovered and special instruction is given, but much of this could have been discovered five years earlier. If there were only a few such cases it would not matter so much, but when we know from perfectly reliable scientific data that there are thousands upon thousands of these cases, fresh ones coming into the school every year, and when we compare with this the populations of our numerous institutions and find that the vast majority of the inmates of such institutions are the mentally crippled, emotionally unstable, and physically handicapped, then we begin to realize that the problem of delinquency, not only in the school but in the home and on the street, is the problem of misunderstood, misdirected, physically and mentally crippled units of humanity, who, because of their misfortunes, are beaten in the struggle of life before they fairly begin. And no small part of this tragedy is the fact that the public schools have not understood, have not met the problem, have not helped the child; that they have, in too many cases, avoided the problem by means of special classes, later by probation, then detention homes, and finally, the juvenile court and the correctional institution.

Successfully combating delinquency in the public schools means a very searching analysis of the problem, a new declaration of principles, a renewed consecration to the advancement of childhood, and a determination to take advantage of everything that mental science has placed at our command. Only in this way can we hope to win in the struggle.

TEACHER-TRAINING SECTION

L. A. Pechstein, *University of Cincinnati,* Presiding

WASTE IN THE RECITATION

Livingston C. Lord
President, Eastern Illinois State Teachers College

There are many sources of waste in education, but no one of them is comparable to the waste in the recitation. I want to read a statement made by George Howland, years ago Superintendent of the Chicago city schools:

> It is the recitation, with its direct or indirect influences, which makes him a trusty friend or a truant, a student or a scamp, and which will guide him along the paths of honest and successful industry, or into the byways of indolence and worthlessness.

The recitation is the heart and soul and mind of the school. If the work in the recitation is not good, no athletic triumphs, no oratorical or other activities can save the school.

Howland says, "a student or a scamp." The etymology of "scamp" is interesting. *Ex*—away from. *Campus*—the battle field. Instead of facing the music and fighting on the battle field, he ex campuses, he goes away. I am sure there is no exaggeration in Howland's statement that on the recitation depends whether he will be a student or scamp, whether he will be guided "along the paths of honest and successful industry or into the by ways of indolence and worthlessness."

We hear a great deal about the dignity of labor and there is a question as to whether this can be taught in school as well as anywhere else. The boy can learn to be industrious in his mathematics class just as he can in the blacksmith shop, and he can roll up his sleeves in translating a foreign language quite as much as he can in the cornfield.

In order that there be as little waste as possible in the recitation, it should be well organized, chiefly to save time that may be used in instruction. It takes a class two, three, and sometimes five

minutes to go to the blackboard when it should take from five to seven seconds. The effect of such waste upon the character of the children is something, but it is not our main reason for wanting them to get to the blackboard promptly. The fact that it takes twenty times as long to do a thing as it should, is worthy of consideration; we want to save that time for work, because a great deal can be done in 173 seconds, if the time is well used.

I once saw a teacher in a summer-school class spend eleven minutes out of a forty-five-minute recitation period distributing one set of papers and collecting another. Think of that!

To avoid waste in the recitation there should be a good atmosphere in the classroom. Professor Davis, of Harvard, some years ago, said that one thing quite fundamental in teaching geography was the easy mind that comes from knowing the subject. I am sure that none of you, but other teachers, have gone into the recitation room with a very uneasy mind over a translation in a foreign language, a problem in mathematics or an experiment in the laboratory. How irritable and sarcastic is the teacher who does not know his subject! A teacher may be just and vigorous and sometimes severe, but he should never become sarcastic. That is one thing that has no place whatsoever in a classroom. It is too dangerous. I myself took the advice of an old man when I was a young teacher, thinking that wisdom came from gray hairs. He said, "Don't use corporal punishment. Use satire." I thought he ought to know, but that is the worst piece of advice that ever came to me as a teacher.

Sources of harm in our recitation and education are at least two: either there is too much of something that belongs in the recitation, or the presence of something that does not belong there at all. To give you a homely illustration—butter may be too salty, or it may contain some coal oil. In either case, you can't eat it. There should be less salt and no coal oil whatever. One of the leading women in school work said there should be no such a thing as drill, because she had seen it used to excess. The drill is salt but the sarcasm is like the coal oil in the butter. It shouldn't be there at all.

To have as little waste as possible in the recitation, we must

very clearly realize that the field is new to the pupil, and that he behaves in a new field just as we do. He blunders and stumbles and gives wrong answers and guesses. I have seen a good deal of that in my experience in the classroom, but I have never seen the blundering in the classroom exceed the blundering in teachers' meetings when things were discussed that were rather new.

The assignment of the lesson, of course, should be very carefully made. That is routine work in all teacher-training classes. After it is assigned, it ought to be prepared.

A high-school inspector in a distant state observed the teaching of beginning Latin with a good deal of care, and he found that the teachers averaged seven and one-half interruptions to a noun declension. An assignment had been well made, the rules for pronouncing gone over, the words carefully pronounced, the students saying them after the teacher. Next day a boy couldn't decline his noun. He didn't know the genitive ending. His teacher helped him determine the declension of the noun. Then she started to develop it in his mind, after telling him what it was. The boy had not learned his lesson. There should be no development of that kind. Pupils should be required to learn any lesson that is properly assigned.

It would take as much time as I have to discuss this matter of questions and answers, the skillful use of questions and the skillful disposing of answers, but I am not going into that at any length. We should see very clearly, if our recitation goes well, the difference between questions that call for an exercise of memory and those that call for an exercise of reason. The memory question, of course, points back, and the other points ahead. The memory question goes over all the ground implied in "since," and the training question points ahead to the ground implied in "therefore."

What is reasoning, but getting some knowledge from other knowledge? When is the boy or girl thinking? When he has two things in mind, and from those two things deduces a third that he does not know? That is not thinking. That is not stimulating, unless we have some master over the art of questioning. For example, a boy has 45 cents and he knows that

strawberries cost 15 cents a quart, but he doesn't know yet how many quarts he can buy for that money. Since he has so much money and there are so many quarts, he can buy as many quarts as this is contained in the sum of money. That is reasoning, and there is nothing in elementary-school work, that stimulates more than the skillful use of questions.

All knowledge is classified experience. From the cradle to the grave the process of classification goes on. This thing is so and so because it is like others in its class. It is not all of the recitation, but it is an important part. Since all knowledge is classified experience, we must know the basis of classification, or we don't get on. Inability to classify is ignorance, and wrong classification is error. The pupil should know how far wrong he is, or there will be waste in the recitation. Many a teacher does not teach well because he is afraid of giving pain. If his attitude is benevolent, there will be no danger of this. Some teachers like to find a student in the wrong, in order to criticize him. That is a bad spirit, of course, in the classroom. On the other hand, the pupil should know exactly how wrong he is. If the criticism is just and to the point, even if it is more severe than need be, he ought to be thankful to get it. If it is given benevolently, there will be a minimum of pain and probably no offense.

In order that we have as little waste in the recitation as possible, we should understand very clearly that it is as professional to know our subject-matter as it is to know the child's mind. Distinctions between what is academic and professional are not always clear. If a teacher is going to teach arithmetic, what is the fundamental thing in his professional equipment? A knowledge of arithmetic, of course. If I am going to teach Hebrew, I am not going to study mathematics. I am going to learn some Hebrew, so I may have something to teach. I have known a few teachers who thought that their knowledge of child psychology would enable them to overcome what they were ignorant of or what they didn't know very well. Subject-matter is, however, just as important professionally as knowledge of the child's mind.

Teaching includes both phases, the child and the subject-matter. The verb "to teach" takes two accusatives. "He taught

the boy grammar." The object *grammar* is just as important as the object *boy*. Yet we hear teachers saying, "I don't teach the boy grammar. I teach the boy." Think of teaching the boy and not teaching him grammar! Yet if this were said in a parent-teacher's meeting, what applause there would be.

To have as little waste as possible in the recitation, we should know when to be mediators. The idea of a mediator is thoroughly sound. Again and again somebody helps another up to his own level and perhaps higher. That mediatorship is important and is a part of our work, but it is hard to know when to be mediators and when to get out of the way. An infant coming into immediate contact with the sides of the cradle learns that something is hard, without any mediator. It is not so in cube root. He needs a mediator there. It is as hard to know when to mediate in the classroom as it is to know in society when to be one's brother's keeper and when to keep one's hands out of one's brother's business.

Then too, we must be very sure that the student's good time consists in learning something, getting knowledge and skill and some strength of mind that he did not have before. A man of national reputation visited a school that I found years ago was the best school I ever saw. He was there two days. He went back to his own school and talked about his visit. He preferred to see faults in schools rather than virtues and to contrast another school with his own to its disadvantage. He said, "I was there for two days, and I never heard the sound of merry laughter coming out of the transoms and ringing through the corridors." Because he never had heard the sound of laughter there is something wrong in the school. What is in the school curriculum that should stimulate the pupils to loud laughter? To think of judging a school by that!

Illustrations of course belong in a recitation, in all instruction. Illustration means that a relation exists between things that we readily see similar to a relation existing between things that we do not understand as well.

A student when asked for a distinction between two things

often names a characteristic common to both, and it is very difficult for him to see that he is wrong. In answer to the question, "What is the difference between a horse and a cow?" the student who replies, "It has four feet," has shown a common characteristic instead of a difference. He sees the cow and the horse so distinctly that he has named the likeness, rather than the distinction.

Every pupil should feel a strain in every recitation. Every one should be on his mettle at some time or other in the recitation. It takes a little more to do this with some than it does with others, but the skillful teacher will see that every student is on his mettle at some time during the period.

I think myself that more harm comes to high schools and elementary schools from the jog trot than from overworking the boys and girls. I heard someone years ago say a very wise thing: "It may happen and sometimes does that the most retarded boy in the schools is the one who is at the head of his class." Classes have been kept at the pace of the dullest boy, which is most unfair to the promising ones. It may be very interesting to reform the dull or the disorderly, but it can be too costly.

To try to reform the disorderly and the dull, to bring about the repentance of sinners, may be very interesting, but their presence is sometimes a harm in the school. The question is not primarily what will become of them if they leave school, but what will happen to the others if they do not? It is this larger number that should be served. So don't let us make the mistake in our recitations or in our school work of confusing interest with values. Some exceedingly interesting things are not of very high value, and some things not so interesting are of great value.

The recitation must, of course, furnish knowledge. There is value in knowing something. People criticize us because we do not pay enough attention to character training, but if we teach well, we pay enough attention to character training in a secondary way. Are knowledge and ability worth nothing as character training? We train the character when we teach these things. Of

course, there is something more than knowledge. The recitation should convert knowledge into something more—into faculty, habit, facility. The pupil must be able to punctuate and spell and capitalize as a matter of habit. Children go to the brain for knowledge, when it ought to be ready in the finger tips. Finding the answer to seven times eight should be an automatic process. Knowledge should be converted into faculty, habit. Opinions are based on knowledge. The man who can convert his knowledge into sound opinions is at a great advantage. The lawyer across the hall may know as much law as Elihu Root, but Elihu Root can charge a thousand dollars for his opinion because of the way he uses his knowledge.

The recitation should also convert knowledge into culture. A person never acquires culture if he is out of breath trying to keep up with a course of study. He must have some leisure. By "culture" I do not mean a thin veneer that won't last very long. I do not mean what the girl caught at the school of expression when she said, "I lawfed and lawfed until I died laughing." A person from the country who eats peas on his knife may have bad manners, but he also may be the real thing. Culture will bring out the fine parts of his character, and instead of being unattractive and boorish, he becomes attractive and well-bred.

EFFECT OF LONG REQUIRED TRAINING ON THE SOCIAL AND ECONOMIC COMPOSITION OF THE TEACHING POPULATION

W. H. Burton
University of Cincinnati

A great deal of work has been done on several phases of the teacher-training problem. Standards of certification have been raised, professional training is required for certification, opportunities for such training have increased, and the normal schools are coming in for much study and reorganization. These factors are, however, all qualified by the vital and fundamental factor,

namely, the type of people who come into teaching. The kind of teaching we get is determined very largely by the kind of people we get into teaching.

Fourteen years ago, Coffman in his famous study, *The Social Composition of the Teaching Population,* presented a number of startling facts about the source of our teacher supply. In the main, our teachers come from the less favored social and economic classes. The families from which they come are large and enjoy but a small income. The lack of cultural advantages and background is obvious.

A fair question to ask is "What progress in raising the general level from which teachers come has been made since Coffman's study?" About ten studies or summaries concerning the teaching population have appeared in the interim. They are smaller in scope than Coffman's, being confined usually to one state or group of adjacent states. An excellent summary of these studies may be found in *The Nation and Its Schools* by Keith and Bagley.

From these later studies we will see that practically no progress has been made in attracting to the teaching profession a better class of recruits. We have the same disquieting picture of a teaching body made up of immature, untrained individuals, drawn from the less favored social and economic classes. Bagley states on good authority that as a matter of fact the raw material out of which teachers are trained has been for a decade steadily deteriorating.

In two respects only is the picture of today different from that of fourteen years ago: (1) We have an ever-increasing number of prospective teachers who are the sons and daughters of our recent immigrants. (2) The city teachers of the country are in the main normal-school graduates. The cities by insisting have been able to force the level up to two years of professional training. But a significant fact is that these city teachers still come from the same classes of society from which teachers in general come.

The question dealt with in this paper is "What effect, if any, will a long required-training period have upon the social and economic composition of the teaching body?" It has been shown

that requiring two years of normal training will not greatly better the type of material we get in teaching.

The Cincinnati plan of teacher training requires five years of training beyond the high school before entrance into the city schools. Coffman's original questionnaire was duplicated and filled in by about three hundred and fifty students and graduates of the Cincinnati course. The results are quite clear cut.

The long required training period sharply reduces the number of students from the less favored economic classes. Either the long period, or the liberal-arts accompaniment, or the combination of both, attracts into teaching a class of young people far superior to the median of the teaching profession at large and somewhat superior to the upper end of the distribution at large.

The students attracted by, and surviving this five-year training come mostly from excellent homes, enjoying good incomes. Their fathers are in the main successful business and professional men. A very few are the children of skilled artisans and there are no children of laborers and practically none from the farms. One very important question remains, namely, can we get a sufficient number of prospective teachers if we insist upon this long training period, which seems to improve our source of supply, but which may decrease it?

Discussion

Dean T. C. McCracken: Dr. Burton's paper on the long required training period as a factor affecting the social and economic composition of the teaching population is an excellent one and on a timely subject. Educators have for many years realized the value of high intelligence in the teacher. They are just beginning, however, to realize the value of many endowments not intellectual which are necessary for good teaching and right influence. It is greatly to be desired that the teacher have high intelligence and the social qualities which distinguish him as an individual of refinement.

Dr. Burton's statement that differences of race must make a great difference in customs, traditions, moral and religious ideas, language habits, and originality, and therefore that such differences

would largely incapacitate certain candidates for the teaching profession may be only partly true. It would be unfair to say that an Italian, a Hebrew, or a Russian could not be as good a teacher as an American. Proper education and sufficient study to enable one of different nationality to understand the backgrounds of American life ought to make it possible for such a person to become an excellent teacher even in American schools.

The jibes of the average citizen about the teacher's lack of personality, leadership, and social standard are probably due somewhat to the type of people in teaching, but more largely to the fact that the teachers are frequently of a retiring disposition and because of their association with children hesitant to take their own part among adults. In many instances they have not been allowed to lead in matters which relate to government. Boards of education have frequently instructed their teachers to take no part in political affairs.

Jibes have probably been cast at teachers because for many decades teachers were not professionally prepared. When the teaching population has been brought to a high level of preparation professional standing will be unquestioned. Scientific research probably would not uphold Dr. Burton's statement that the action of the cities in raising salary schedules requiring a training period which shall include not less than two years beyond the high school has in no way affected the type of people that go into teaching. The work of the average bureau of appointments does not uphold his statement. The best teachers socially and professionally secure the best salaried positions.

One of the most interesting phases discussed was the effect of the present Ohio law which requires entrance examinations to teacher-training courses. Illustration was given from the enrollment in Ohio University. This indicated clearly that the law requiring entrance examinations to two-year courses has decreased the enrollment in those courses more than fifty percent. If this result means the tearing down of short courses for teacher training and the upbuilding of four-and five-year courses, much good may result from the law. If, however, when the law is applied to four-year courses, as it will be at the opening of the college year,

1925-26, students shunt themselves entirely out of teacher-training courses, thus tearing down in very large measure all of the teacher-training machinery which has been set up by the state during the past decades, the results will be disastrous to teacher training in Ohio. Under such conditions those who enter the teaching profession would do so by climbing up in some other way, chiefly through liberal-arts colleges and the passing of state examinations for certification, or by securing merely the twenty-four hours required by the State Department of Education.

STATE JOURNALISM CONVENTION

THE SCHOOL PAGE IN A CITY DAILY

S. Carlyle Adams
Columbus Dispatch

It is only recently that school-age children have received their due attention from the newspapers. In fact, ten years ago one seldom saw the name of a child in a newspaper article unless the story was one of crime in which the child was implicated. In other words, only the bad or unfortunate child received public recognition. This was not entirely the fault of the newspapers. They have taken as much interest in the rising generation as have other public institutions.

A few years ago three Ohio newspaper men began working on a new plan. Many attempts had been made at publishing special pages or sections devoted to the interests of children, but these usually consisted of what the newspaper man called "canned goods." They included picture puzzles, fairy stories, contests, and other very juvenile features which had practically no educational value or local interest. The plan tried by the Ohio men aimed to emphasize the commendable acts committed by pupils in the public and parochial schools in the city in which they were doing their work.

A school page was introduced into the Sunday issue of the paper and the news articles on that page were to be written by pupils with careful supervision and censorship from their teachers and school principals. Writers of the school news were chosen by the principal on the basis of their scholarship or attitude in school work. They were told that any items of interest to school children would be of interest to the readers of the school page.

The plan was so successful that it became necessary to enlarge the page to an eight-page tabloid section. This brought another splendid opportunity. It was now possible to publish a real miniature newspaper, modelled after the style of a city daily, but fitted to meet the needs and interests of school pupils from the

first grade through the high school. The little paper even included an editorial page and a sport page, edited by men who were in touch with the school pupils and were able to write in such a way as to attract their interest.

Most papers however, are forced by space regulations to confine their school features, written by pupils, to one page. Since the beginning of the project mentioned above, school pages and school sections have been introduced in city dailies all over the United States.

Newspaper men are beginning to realize that the space and slight additional expense are worth while. In Columbus, for example, there are approximately forty thousand children enrolled in the public schools. Most of these children have two parents each, who are vitally interested in the schools. In addition to this, there are more than twelve hundred teachers. There are also many persons who read the school page because they are interested in children or because it helps them, in a measure, to recall their own school days.

It is safe to predict, I believe, that the time is approaching when the school page will become a regular feature in city dailies—as important as the sports or dramatics pages.

NEWS SERVICES AND SYNDICATES

E. E. Cook
Ohio Editor of The Scripps-Howard League

Press associations and newspaper syndicates are both vital to the modern newspaper. They form two of the three main classifications into which the news contents of a newspaper may be divided. These are:

1. News, features, and illustrations developed within a newspaper's own territory by itself.
2. World-wide news and features, including state and national, usually secured from reports of press associations.
3. Features, comics, and illustrations, usually secured from syndicates.

There are three press associations that supply complete news reports, and one or two that put out supplementary reports. The three press associations with complete reports are the United Press, the Associated Press, and the International News Service. Each of these has an evening and a morning report.

Group effort to secure and distribute world-wide and other general news dates back to colonial days when news was secured from incoming ships and copies were sent by pony express all over the colonies. The great press associations as we know them today are a development of the last quarter-century.

All of these press associations function very much as an individual newspaper functions in covering its own territory. The newspaper has reporters stationed at sources of news, the city hall, the court house, the police station, to name a few familiar "beats," and outside on general assignments wherever matters of interest are likely to "break." The press associations station their men in the important cities of this country and foreign capitals, commercial centers, and crossroads of international traffic. Where a newspaper may have one or more reporters at a riot, the press association has correspondents at a war. Where a newspaper has a man at the city council, the press association has bureaus in Congress, and correspondents abroad watching parliaments. The city editor must know his city thoroughly; the telegraph editor, his world.

Where three different papers will have three different versions of a local story, written by three reporters who were eye-witnesses, the three press associations will have three different versions of a world event according to the ability and viewpoint of their correspondents. Therein is the greatest difference in newspapers, as in press associations. It is the human element, the viewpoint, the method of attack, or whatever else you want to call that variable property which means a dry account from one man, a bright one from another, and a human one from a third, all about the one incident.

Syndicates furnish features, as distinguished from "spot news," the product of press associations.

Editor and Publisher, a newspaper trade journal, listed nearly 1,000 separate features last October that were on the market then. They were the offerings of sixty-six different syndicates. Even that is not an adequate picture of the tremendous volume of syndicate material offered the editors of the country for their newspapers. The Newspaper Enterprise Association, listed among the sixty-six, does not sell any one feature. It sells a complete feature service, including a woman's page, a sport page, a comic page, a page of editorial miscellany, including cartoon, one or more pages of general news features, and numberless pictures for use either in a picture page, or to illustrate the news of the day, or to file away for future use.

Only one other syndicate attempts to get out a complete service like the National Enterprise Association's, the Central Press Association. Both are Ohio institutions, having their headquarters in Cleveland. The National Enterprise Association puts out service sheets from Cleveland, New York, and San Francisco.

Of the other syndicates at least one, the Bell Syndicate, claims to supply "every feature a newspaper needs." Features originated for Hearst papers are sold by a half-dozen different syndicates, the dominant one being the King Feature Syndicate. Most of the rest specialize, some on pictures, some on sports, some on comics.

Besides firms and individuals primarily engaged in the syndicate field, several leading metropolitan newspapers sell their features to papers published in other cities. Even book publishers have invaded this field, led by Doubleday, Page and Company, which maintains its own syndicate department. Most other publishers sell serial rights to books and articles through established syndicates.

In such an overcrowded field, the mortality, both of features and of syndicates, is high. So great is competition that in the case of the story of the world-aeroplane flight two syndicates, *McClure's* and the *Chicago Tribune,* combined their resources to outbid the field.

It has been said of the American newspaper of the present day that it has become too much standardized as a result of the use of press-association reports and syndicate features. A paper in Maine resembles a paper in Texas.

That is hard on the traveling public, who may like variety. But for the great bulk of newspaper readers, the press associations and syndicates make available news and features that cost hundreds of thousands of dollars to produce, and that few single newspapers could afford to develop for themselves. The press associations and the syndicates have made metropolitan papers of small-town dailies. As long as there is more than one press association and more than one syndicate, competition will make for better products and improved newspapers.

The word syndicate is applied also to an organization or chain of newspapers, owned and operated by one person, or by a single group.

The Scripps-Howard Newspapers, with which I am associated, own and operate the largest number of newspapers published by one management in the English language. William R. Hearst publishes the next largest number.

The chain of newspapers is an English institution, hardly known in this country outside the Scripps and Hearst properties until recent years. Then small groups sprang up. Pulitzer was a pioneer, with his *St. Louis Post-Dispatch* and *New York World,* but he did not extend his holdings beyond those two. Munsey came into the field recently, but bought to kill off, or consolidate, and has few survivors in his hands now. Cox has three papers in Ohio and one in Florida. Curtis, the magazine publisher, owns the *New York Evening Post* and the *Philadelphia Public Ledger.* The *Chicago Tribune* branched into the New York field, with its *Daily News.* Cornelius Vanderbilt is the most recent entrant, and there are others.

Newspaper syndicates, or groups, should be able to give even better news service than individual newspapers because they have greater resources behind them. For example, in Ohio, our six papers are connected by a private printer wire system, over which

news of the state traverses. When any one of our papers wants special service in any city, or in the territory of a sister paper, it requests it over this wire system and the story is supplied. In other words, the combined staffs of all six papers are at the service of any one. This is true not only on the editorial side but on the business side, where the group can purchase paper and materials in quantities, to mutual advantage.

Press association and syndicates are very important adjuncts of the modern newspaper. It is difficult to visualize a newspaper in this day remaining alive without their services.

A paper may buy and use the output of the funniest humorists, the most brilliant feature writers and the sprightliest comic artists; it may fill columns with dispatches from all corners of the world; but if it does not know and interpret the life of its community, if it does not speak the language of its own people, if it does not render its community the highest service it is capable of, it will gather moss and lose out in the race for life. A newspaper is human, and it lives or dies, as it fits into the fabric of the society it serves.

WHY PUBLISH A SCHOOL NEWSPAPER?

Clara C. Ewalt
Cleveland School of Education

The power of the city newspaper is infinite. The story about an undeveloped country puts an idea into the mind of the man of affairs so that eventually there is a railroad through that land. The country newspaper in spite of its small circulation has helped to consolidate schools, to bring about better roads, more intensive farming, and a more attractive social life.

There is no essential difference between the influence of the country newspaper and that of the school newspaper. Benjamin Franklin, still the outstanding figure in American journalism, always had a circulation from five hundred to two thousand only.

What has all this to do with my subject, "Why Publish a School

Newspaper?" Everything. We want a school newspaper for its power. To get your young editor to realize this power, ask him to visualize his audience. Have him choose a hall in his town large enough to hold his subscribers and imagine himself under the necessity of finding enough live stuff to hold them for twenty minutes each week.

The school press has power: because it unifies the school; because it gives a reason for writing; because it is the medium through which the man of forty who still thinks of education in terms of the three R's may be brought to understand modern training; and because it helps school morale.

The first two reasons for the strength of the school press I do not discuss. About the third I would give a word of warning. Examine every issue after it appears to see that the stories really show the newer phases of education. The story about the explorer who talked in assembly about the African jungle won't do much. The story about the freshman girl who has been adjudged to have the best posture in school, and the one about the class which is budgeting its spending money will do a great deal.

To show how the school press helps morale, I have the four stories from the *Junior College Journal* which aroused the liveliest interest among the students and among outsiders within the last two or three months.

(Here Miss Ewalt read leads from four stories, the first a story about a suburban school where students were getting better grades than those in a city high school; a second about girls declaring there was some lack of honesty in preparation of school work; a third about the cultural lacks students felt; another about students who stepped into the lunch line ahead of their turns, the material for which article had been gathered by a reporter who watched the line. She showed how the stories affected morale, and gave a copy of every story to each teacher present.)

If we would accomplish all these good purposes we must pay even more attention to technique. Columbia University, the University of Wisconsin, and Ohio State University are on the

right track when they award prizes in school-newspaper contests on the basis of technique. The teacher who says "This is just a school publication. What does it matter?" is on a devious path, leading to a weak paper. If she is right, then all the city-newspaper men in the country are wrong.

We must remember that we have not made a newspaper because we have had our pupils write some articles, have had these articles set up in type, and printed on four pages of news-print paper. Kittens aren't biscuits because they were born in an oven.

THE FIELD OF THE HIGH-SCHOOL MAGAZINE

Helen M. Dudley
Woodward High School, Cincinnati

At the last minute, this morning, I was asked by Mr. Getzloe to conduct the Student-Magazine Section. While I regretted that my doing this would deprive me of hearing what the rest of you said in the advisers' section, yet I am glad that I had the privilege of being there, for it gave me the much-needed inspiration of seeing a strong, enthusiastic state group of students, in love with the school magazine, loyally and efficiently upholding its highest ideals.

By "much-needed inspiration" I mean that on arriving this morning at Mr. Johnson's clinic, I had been dismayed and puzzled by the apparent exclusion of the magazine from the display, and of magazine representatives from the clinic program. I later saw that there were some magazines here on the table and I was assured by Professor Myers, that the proportion on exhibition was similar to that existing between the two in the outside world; that the new organization and the movement to put journalism into the high-school curricula did not wish the crowding out of the magazine, since training in such courses could be given for magazine work as well as newspaper work.

There is no quarrel between the high-school newspaper and the high-school magazine. They move in separate fields. But my

main idea in speaking on "The Field of the High-School Magazine" is to champion that field as a field, to extend the hand of fellowship to all who are in it, and to ask those who are leaving it or compromising on it, to stay in it and to keep it intact. These two publications cannot take the place of each other. The main difference is this: the newspaper, by the frequency and haste of its output, is the better mirror of the school; the magazine, because of the longer intervals between issues, giving time to perfect style, is the more literary. For the same reason, it offers events and the school's reactions to them as formed opinions rather than flying news, and thus gives clues concerning the standards and ideals of the school.

In other words, the main difference in the two publications is that one is a mirror while the other, the magazine, is an interpreter of the school.

It is obvious from this that the newspaper would primarily train students in the news-scenting, rapid, snap-shot method of reporting, while the magazine would train in more literary forms, particularly in writing for special departments.

Dana Burnet is an example of a writer so started. He cordially attributes the beginnings of his literary career to his work for the *Oracle,* the magazine of his alma mater, Woodward High School, Cincinnati.

All the well-known advantages that come to students on any school-publication staff teaching that fine loyalty and cooperation that come from "working with others on a large plan for the greatest good of the greatest number," come in especially large measure to the staff workers of the high-school magazine; for the greater responsibility necessarily placed on each head, by virtue of the long intervals and the fewer opportunities for cooperation, causes each to strive to live up to his accountability in getting out the rarer monthly event.

The staff adviser of the high-school magazine has many especially fine opportunities to increase the usefulness and high quality of that publication. But the greatest service she can render the publication itself is in laboring unselfishly and disinterestedly to help those asking her advice to select the right staff. The mem-

bers of the magazine staff are rightly claimed to be more important to the school than are the members of its athletic teams. They should therefore be picked with as great care, if not held to as "strict a program of training and accomplishment." Because of the peculiarities of the magazine, the right staff, headed by the right editor and business manager, are peculiarly the *sine qua non* of this publication. It is, no doubt, because of the increasing recognition of the fact that the best material in the school must be secured for the staff of the school's magazine, that the methods of securing such a staff are changing from the ones heretofore used, permitting the individual politicians or personal favorites to secure class nomination and election, to those which impersonally canvass class material, shy and bold, and select the right heads and staff members with reference to the real qualifications which fit them for working together most ably for the magazine. Such methods try to select those best adapted to the high-school publication, as city-papers or real magazines select their men—for merit and fitness only.

The editor and business manager, picked from the best the class has to offer, together with the staff adviser, all three in free and sympathetic consultation with the principal, pick the rest of the staff in actually prayerful attitude. No wonder reports of results are so satisfactory.

But it is the school itself as an institution that reaps most benefit from this magazine. These pages give it a new revelation of itself as a unit composed of many harmoniously fitted departments. Through this finer and completer self-knowledge the school will be bettered.

Its interpreter, moreover, is the best means of comparing the school with other schools, through their magazines.

It has often been said that the newspaper, reaching two parents, or citizens, to each pupil, is the finest means of bringing the inside matters of the school to the people, so that when the public's help is needed it will be at once forthcoming.

This has often been demonstrated. But when those needs are presented as settled and definite, instead of shifting with the quicker issues of a newspaper, the public is more sure that these

are real. In other words, the magazine might be said to advertise with especial effectiveness, since it advertises, as it represents, artistically.

The magazine's peculiar aid to the school then, is the sorting of the permanent vital things from the temporary; the stabilizing and setting forth the reactions of the school as standards; the helping of the school to a better self-knowledge and a better means of comparing itself with other schools; and the expression of the underlying spirit and ideals of the school. It is hoped that, instead of giving up their magazines, the schools will increasingly appreciate them, until the magazine of every school in Ohio is issued by a group of boys and girls who meet daily and work on it as on other subjects, for curriculum credit.

The magazine being a school feature of real importance, charm, and dignity, as well as a useful friend that serves each person in the school investing the slightest cooperation in it, should not be abandoned any more than the newspaper, the school's instant faithful mirror. Nor need either lose its identity by being part of a publication that combines magazine, newspaper, and annual. "Large schools may have both newspaper and magazine"; the Juniors putting out, bi-monthly, a one-sheet paper; the Seniors, monthly, a magazine; Juniors and Sophomores helping both. At the end of the year the magazine staff may be selected from the finest possible group—those who have done best, the year preceding, on both staffs. In this way, the two publications may reinforce each other, may give students the opportunity of practice in the writing line they prefer, and at the same time, give the school the benfit of both forms of publications.

NEWS WRITING AS AN ENGLISH COURSE ASSET

Evaline Harrington
West High School, Columbus

One early spring day, I was walking along a country road and overtook three children with their arms full of blossoming branches. The new wine of the year had unloosed their tongues and they were talking and caroling. Straightway they began to

tell me where they had been and what they had seen. They were unreservedly gleeful and talkative. They skipped on ahead, and soon I saw them dart from the road and hide behind some bushes. When I passed them, they were crouching down trying to be invisible. They put their fingers to their lips, making a gesture for me to pass on. One whispered: "S-s-sh, don't let on we're here; our teacher is coming up the road and we don't want her to see us. If she does, she'll make us write a composition tomorrow on Our Day in the Woods." I understood and passed on.

This story is an illustration of the way in which pupils regard theme writing; the fact that the teacher's method of extracting written work is non-understanding, stupid, and artificial is recognized by children; they see no reason in writing for a hurried class reading, for the teacher's delight in red-inked corrections, or for the janitor's wastebasket.

The writing of personal news items based on the child's objective world is advised as an incentive for natural self-expression. The shortness of the news item is also adapted to the limited experience and vocabulary of the child. Its simple formula can easily be taught children. Have the items written or printed on strips of paper, the width of a newspaper column, for this will increase the realism. Appoint an editor and a board of pasters who will also correct mistakes. Paste the items on the social page of the city newspapers. This makes an interesting lesson after vacation. Similarly short accounts of the happenings at school could be made into a school page.

The writing of news sentences is also recommended as a remedy for the mechanical way in which sentences are assembled for grammatical purposes. Children are given subjects for sentences and told to furnish predicates. "Aunt Mary" was given to a child as a subject for a sentence and she wrote, "Aunt Mary is good" but she brought to the teacher the following news item about Aunt Mary:

"Miss Mary Roberts of 12 Fallis Road came home from Florida last week and brought a baby alligator. She says there are robbers in Florida. She was robbed. She hasn't a cent

left. She says she would rather be an icicle in Ohio than to be robbed in Florida."

These are better sentences because self-expression and not grammar inspired them. The fact that students of all ages cannot write sentences may be due to the stilted, conscious way in which pupils are taught to write them.

Practice in newswriting makes for clear sentence structure, for natural, straightforward expression, and for the enforcement of rules in grammar and punctuation. The inspiration of the printed page is mighty, even in childhood.

INTERSCHOOL PRESS CLUBS

EMMA J. WILSON
President, Cleveland Journalism Association

Any discussion of interschool press clubs naturally divides itself into two parts: first, why have these clubs? second, how shall they be organized?

In the first place, school-press clubs are necessary because the subject of journalism for high schools is so new that there is a large mass of knowledge yet unorganized. Hence, there is no textbook which contains all the information that any school-paper staff needs to use. This information must often be obtained from experts who are in practical newspaper work. Since these workers are naturally very busy persons, it would be impossible for them to address each newspaper staff separately. Therefore, the organization of a club is necessary. In the second place, criticism of the school newspaper by students and teachers who work on other school papers is extremely helpful; and a good press club can accomplish this.

Press clubs function most satisfactorily when organized in two groups, one for the teachers and the other for the students with the teachers as advisers. The teachers' group should concern itself mainly with the highly technical sides of the production of a school newspaper, with securing recognition for and appreciation of their work from boards of education, with courses

of study, with college-entrance credits in high-school journalism, and with the building up of a truly professional spirit among the group. The students' group should be less formal in character, and may profitably combine social with professional activities. The different schools should act as hosts to the club, monthly perhaps, thus allowing the members of one high school to become acquainted with those of another. Speakers who will definitely instruct the students, and who will frankly criticize the various papers, but who will at the same time be entertaining, should be secured.

These opinions are based entirely upon the successful operation of two such clubs in Cleveland. The Cleveland Association of Teachers of Journalism, which has been functioning along these lines for a little over two years, has, we feel, accomplished much toward the improvement of working conditions for teachers, and has contributed largely to whatever success Cleveland high-school newspapers have achieved. The students' organization, known as the Hi-Press Club, has had enthusiastic bi-weekly gatherings over a period of more than six years. It has been continually under the leadership of the director of school publications of the Board of Education, Mr. Clyde R. Miller; and its continuous success is no doubt due to the fact that he has carried its ideals over from one semester to the next. It is wise, wherever possible, to secure some such person to organize and lead the students.

Judging from experience, we urge all communities to organize city, township, or county clubs for all who are interested in the improvement of high-school publications.